

# Alternatives

## 2.0 Introduction

The purpose of this chapter is to present alternatives to the proposed project, including the no action alternative, and provide a summary of impacts by alternatives. This chapter presents alternative ways to meet the project's purpose and need, and provides information on alternatives considered but eliminated.

The alternatives are compared in terms of their environmental impacts and their achievement of objectives. The purpose of this chapter is to allow the reader to understand the project design.

Four alternatives have been designed to build and operate a light industrial park. The National Environmental Policy Act (NEPA) also requires that a No Action alternative be described as a viable option to the proposed action alternatives.

All of the alternatives provided below are reasonable and viable, in that, if chosen by the decision maker, can be implemented as described. The description of the alternatives is followed at the end of the chapter by a table, which shows the anticipated environmental impacts of each alternative.

## 2.1 Preferred Alternative

The preferred alternative for the Coyote Business Park is Alternative E.

## 2.2 Criteria for Alternative Development

The following is a discussion of the process that was used in evaluating potential alternative sites and alternative development plans. Included in this discussion is a list of the qualifications that the project would have to meet in order to be considered viable.

The purpose of the Coyote Business Park is to create job opportunities for CTUIR members; diversify revenues for tribal government; and develop land for business location and expansion on the Umatilla Indian Reservation. Relevant environmental issues include fish and wildlife impacts; air quality; water availability and quality; transportation; cultural resource protection; noise impact; visual impact; and social and economic impact. The Coyote Business Park must protect cherished environmental, cultural and social resources of the Reservation while also providing job opportunities, revenues, and business opportunities for enrolled CTUIR members (Table 2-1).

## **Location on Trust Land**

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In order to meet these objectives, CTUIR considered the competitive advantage of the Umatilla Indian Reservation with respect to other business park locations in the Northwest. The Umatilla Indian Reservation is rural, with relatively low population density, and does not have abundant intermodal (surface, air, rail, water) transportation or ready access to the markets and suppliers that make urban and suburban locations desirable for many growing businesses. The competitive advantage of a proposed tribal business park would lie in the unique federal tax incentives in effect for businesses locating on trust land. As such, CTUIR recognized that the business park would need to be on trust land.

## **Proximity to Interstate 84**

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CTUIR acknowledged that one of the region's primary attractions is the availability of large parcels of land with good interstate access for regional warehousing and shipping operations. Northeast Oregon is roughly equidistant from Portland, Seattle, Spokane, and Boise and provides interstate access for both east-west traffic and north-south traffic between these markets. Therefore, proximity to an interchange of Interstate 84 became a qualifying criterion for potential sites.

## **Other Site Selection Criteria**

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Following that, the site had to be large enough that it could attract industries that would provide job creation and revenue benefits (at least 20 acres and preferably larger for light industrial or warehousing operations). It should be located in an area away from areas already impacted by current traffic levels where additional business traffic would not pose an undue safety risk to surrounding residents. The site should be close enough to the main tribal population center on the Reservation to allow for easy commuting for the new jobs that would be created. The project could not be located in an area that would damage cultural or environmental resources. The site should already be in tribal ownership, if possible, to minimize acquisition and development costs.

The site should be within reasonable distance of existing infrastructure; or should have the ability to support development of adequate infrastructure (domestic water, sanitary sewer, fire protection, surface water drainage, utilities, and roads.) Finally, it should be appropriately designated for future industrial (and not agricultural, rural residential, or commercial) development in CTUIR plans.

**Table 2-1**  
**Criteria for Locating Coyote Business Park**

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| <ul style="list-style-type: none"><li>• Location on Trust Land</li><li>• Proximity to Interstate 84 at Exit 216</li><li>• Size (20 acres or larger) to provide adequate space for light industrial or warehousing operation</li><li>• Location away from congested area</li><li>• Location on or near reservation for CTUIR tribal employees and for diversification of reservation economy</li><li>• Low to minimal impact on water, habitat, cultural or environmental resources</li><li>• CTUIR ownership of land</li><li>• Proximity to existing infrastructure or ability to develop adequate infrastructure</li><li>• Appropriately designated for industrial development in CTUIR plans</li></ul> |
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## **2.3 Profile of Alternatives**

### **Project Design Common to All Action Alternatives**

The following project design elements are applicable only to Alternatives B, C, D, and E.

#### ***Types of Uses***

Allowable uses would be those “light industrial” uses that meet the criteria contained in the Land Development Code for the Industrial Development Zone; that meet Confederated Tribes of the Umatilla Indian Reservation (CTUIR) objectives for job creation; have minimal water usage or emissions; and meet CTUIR objectives for environmental protection and restoration. Sample uses that meet these criteria include the following:

- Pelletized Hay manufacturing
- Straw Board manufacturing
- Specialized food manufacturing (baking, condiments)
- Recreational equipment manufacturing
- Manufacturing of recycled building materials
- Renewable Energy (Biodiesel) production
- Laboratory
- Warehouse
- Truck or vehicle repair facility
- Distribution center
- Recreational vehicle manufacturing
- Trailer manufacturing

- Injection Molding for Agricultural Equipment
- Machining for Agricultural Equipment

Before any leases would be approved by the Bureau of Indian Affairs (BIA), any uses that would have requirements not considered in this analysis would be subject to further review through a Supplemental Environmental Impact Statement (EIS) and appropriate CTUIR and federal permitting agencies.

### ***Employment***

As a condition of the lease, employers would be required to enter into a “First Source Hiring Agreement” with the CTUIR Tribal Employment Rights Office (TERO) to consider Native Americans for employment and to hire any qualified Native Americans prior to considering other candidates for any jobs created as a result of locating in the Coyote Business Park.

CTUIR workforce training assistance programs would be directed toward training CTUIR members for available job openings at the Business Park.

### ***Timing of Jobs, Project Development and Business Operations***

The first phase of the project, possibly beginning in 2006-2007, would involve construction of site utilities and provision of infrastructure to the lot line. Construction (temporary) jobs would be created (see Chapter 3.10 for more detail.)

The second phase would involve identification of appropriate tenants for the business park, approval of an operating lease by the CTUIR and BIA, and construction of buildings and other facilities. This phase could occur concurrently with or subsequent to Phase I and could thus occur in 2006 or later. These facilities would be constructed by the tenants, and would result in the creation of temporary jobs. The timing of this job creation would be difficult to predict.

The third phase would be ongoing operations of a business once it has constructed its facilities. The result would be the creation of permanent operating jobs. Each tenant in the business park would likely start operations at a different time, and so the timing of permanent job creation would vary considerably depending on market forces.

### ***Water Use***

Elements of consumptive water use in each Action Alternative include:

- Domestic (drinking) water for employees (estimated at 15 gallons per employee per day)

- Incidental industrial use (for washing equipment, for example, and not as a major component of the manufacturing process)
- Site landscaping

See Chapter 3.12 for more detail on proposed consumptive water use under each Alternative.

### ***Surface Water Drainage, Detention, and Retention***

Individual lessees would be required to construct an on-site surface water retention area for the purpose of collecting surface drainage within their lot as a condition of the lease. These retention areas would be designed with appropriate oil and water separators and size and slope specifications in order to meet the lease requirements that no surface water would leave the leased site. Estimated total surface area varies with the amount of impervious surface created by each individual lessee. A sample retention area serving a 5 acre site with a 15,000 square foot building and similarly sized graveled parking area would need to be approximately 70 feet by 70 feet, for example.

The specifications of the surface water retention ponds would be subject to approval of CTUIR Planning Department through a site plan review process.

CTUIR would construct roadside swales to retain surface water as part of the transportation system. These swales would be seeded with drought-resistant bunch grasses (e.g., sheep fescue) that would allow sediments and potential surface water contaminants to be filtered as they travel downstream. They would be designed to provide the capacity to retain a 10-year 24-hour storm event.

In order to maintain surface drainage in its present condition, the location of agricultural drainage tiles placed on the site would be identified and the system preserved during construction of proposed infrastructure. Any new system must be planned and implemented according to approved specifications, and would require approval of an operation and maintenance plan.

### ***Road Access and Road System***

Access from the project area to South Market Road would be provided through a new access point constructed 1,320 feet south of the existing interchange. This access point would provide service to and from the development site. This location has been determined by CTUIR staff to comply with the recommendations of the CTUIR Transportation System Plan and satisfy the 1999 Oregon Highway Plan (OHP) Access Management Spacing Standards for Interchanges.

Two additional improvements would occur on South Market Road. At the proposed intersection of the site access driveway and South Market Road, an exclusive southbound right-turn lane would be constructed to facilitate right-turn movements into the development site. This turn lane would be established to facilitate safe and efficient movement of vehicles into the site, particularly large trucks that would need ample space and distance to decelerate when turning. The recommended turn lane would ensure that other vehicles continuing southbound along South Market Road would not be delayed by slower moving vehicles turning into the site. In addition, the surface of South Market Road between the new access site and the beginning of Highway 331 (a distance of approximately 1,320 feet) would be improved to an industrial standard. ***These improvements would be constructed in 2008 as part of the proposed Oregon Transportation Investment Act (OTIA) project planned for this area.***

All internal roads of the industrial park would be centered within a 100-foot right-of-way. The roads would consist of one lane each direction, 14 feet wide, with 4 feet of paved shoulder and 2 feet of gravel shoulders on each side. Both sides of the road would be equipped with surface drainage swells as discussed in the surface water section. Underground utilities would be located along the road outside of the pavement area. The total length of the road constructed under this alternative is estimated at ¼ mile.

Roads within the proposed project area would be maintained by CTUIR.

### ***Utilities***

Power, gas, and phone service would be extended to the site within the proposed utility corridor that runs parallel to the proposed road construction. Typically, CTUIR would construct the utility trench and each individual utility provider would extend lines in the trench in a right of way at their expense. These line extensions would be owned and maintained by the particular utilities. Trenching and conduit would accommodate underground power, gas, and telephone service.

Providing natural gas service to all areas of the industrial park would require extending the distribution main from its present location to the south side of I-84. The main would pass under the interstate and Patawa Creek and would require the installation of an additional main service line.

Telephone and power service is currently available immediately adjacent to the site. Fiber optic service would require extension from Mission Road, approximately three miles north.

***Patawa Creek Riparian Management Zone, Agricultural Buffer, and Wetlands***

CTUIR would establish and maintain a Riparian Management Zone (RMZ) in that section of Patawa Creek that would otherwise be included within the area affected by the project. The RMZ would be a vegetated buffer strip planted in native plants whose purpose is to protect the riparian function, beneficial uses, and water quality in Patawa Creek. No industrial, commercial, agricultural, or recreational uses would be permitted in the RMZ.

The three isolated wetland areas on the site would remain undisturbed under any of the Action Alternatives.

The current agricultural buffer strip that has been planted and is being maintained by CTUIR Tribal Farm Enterprise throughout a portion of the parcel would continue to be maintained in that area that would not be affected by the RMZ. This buffer strip is planted in orchard grass. The estimated buffer area would be less than one acre total (including areas both south and north of Patawa Creek.)

***Cultural Resource Protection***

Shovel testing in the location of the major ground-disturbing portions of the proposed development would occur prior to construction, as determined by the Tribal Historic Preservation Office (THPO). If cultural resources were identified in the course of shovel testing, applicable federal and tribal laws protecting cultural resources would be implemented. A cultural resource monitor would be present during ground-disturbing construction activities, as determined by the THPO. Leases for the business park would include language protecting cultural resources.

***Landscaping***

A landscaped area would be established approximately 30' wide along the eastern and southern edges of the proposed business park, adjacent to South Market Road and Tutuilla Church Road. This area would be irrigated and planted to create an attractive visual buffer area around the proposed business park.

Approximately 10' on each side of the internal business park road system would be irrigated and landscaped to provide an attractive visual environment within the business park. This landscaping may be

phased in over time as the business park lots lease up and revenues permit.

### ***Adjacent Uses***

Operations at the Oregon Department of Transportation (ODOT) gravel shed and CTUIR Tribal Environmental Recovery Facility (transfer station) would continue under all of the action alternatives. Under all of the action alternatives, the area that is not within the footprint of proposed development would continue to be farmed by either CTUIR Tribal Farm Enterprise or the private lessee.

### ***Best Management Practices***

In order to reduce the possibility of affecting any biological resources or water quality, the following Best Management Practices are recommended during and after construction:

- Implementation of an Erosion and Sediment Control Plan (Required by CTUIR Stream Zone Alteration Permit).
- All in-stream work to be completed during the in-stream work window (Required by CTUIR Stream Zone Alteration Permit).
- Any in-stream work to be isolated from the main flow during construction (Required by CTUIR Stream Zone Alteration Permit).
- All areas bare after construction would be re-vegetated (Required by CTUIR Stream Zone Alteration Permit).
- Sedimentation control ponds would be constructed so all waters would be caught and solids allowed to settle.
- Grass and large wood species would be planted to encourage shading and percolating, which would reduce water temperatures.
- Buffer strips along both sides of Patawa Creek (RMZ) would be planted so any water that might migrate to the stream would be filtered.
- Any trench crossing Patawa Creek would be constructed to match soil compaction and composition to the surrounding creek channel in order to minimize erosion.
- Bridge design that minimizes potential for future erosion and increased sedimentation in Patawa Creek.
- Specific planting of native plants within RMZ.
- Pollution control plan during bridge crossing to eliminate possibility of construction-related pollution entering Patawa Creek.
- Any fuel storage tanks located on site would be regulated by the U.S. Environmental Protection Agency (EPA) and would have emergency spillage protocols, and mitigation, and a Pollution Prevention Plan (PPP).

### ***Alternative A (No Action)***

Under Alternative A (Figure 2-1), the CTUIR would not provide water, sewer or utility service to the site and would not seek industrial or commercial tenant(s) for the site. The current land management situation

as described below would continue. The BIA would not grant business leases for the site.

***Current use and maintenance***

Most of the site (approximately 476 out of 520 acres) is currently in dryland agriculture. Approximately 292 acres are farmed by the CTUIR Tribal Farm Enterprise, and approximately 184 acres are leased to an individual for farming.

Currently, the Tribal Farm Enterprise has established a buffer strip approximately thirty feet wide and planted in non-native orchard grass along a portion of Patawa Creek. There is no buffer strip on the 184 acres of land under lease to an individual; it is farmed directly to the edge of the creek channel.

Approximately 30 acres north of Patawa Creek are inaccessible to farm equipment. This portion is not maintained and consists of a combination of native and non-native grasses and noxious weeds.

The Bonneville Power Administration (BPA) has an easement (100' wide) for the 230 kilovolt power lines that cross the site from Billy Road at the western edge of the parcel to South Market Lane on the eastern edge.

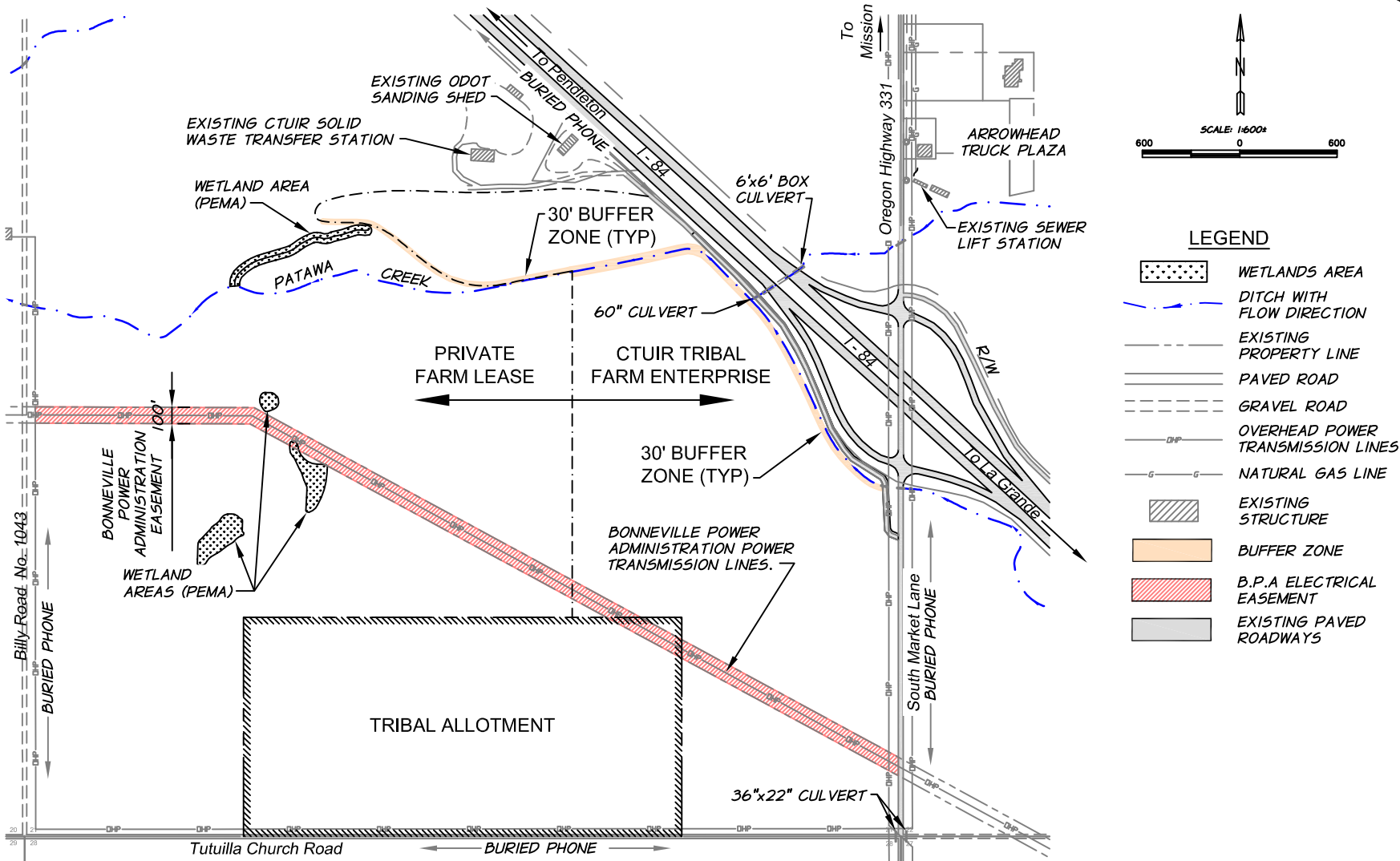
## **Alternative B (21 acres)**

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***Proposed Use, Operations, and Building Facilities***

A total of twenty-one acres would be leased for the purpose of construction and operation of "light industrial" businesses (see Figure 2-2 and Detail, Figure 2-3). Types of Uses are listed on page 2-3. These uses would be supported by the construction of infrastructure as detailed below.

Under Alternative B, three lots ranging in size from six to eight and a half acres would be developed and made available for lease. The three available lots would be leased by businesses that would construct buildings of an estimated size of 15,000 square feet each. Projected building type would be steel or wood frame with concrete floors.

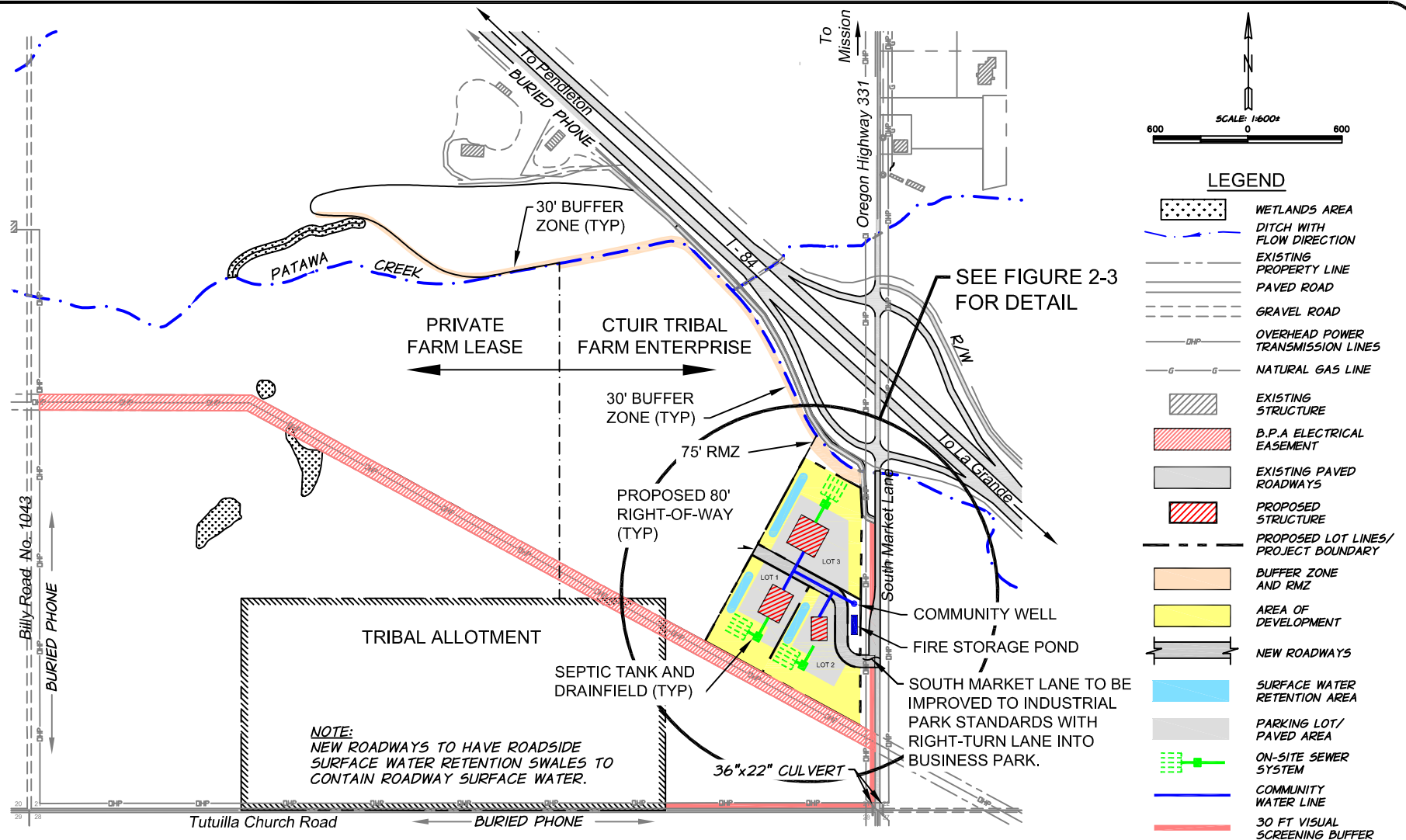


## ALTERNATIVE A

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ENVIRONMENTAL IMPACT STATEMENT  
**EXISTING CONDITIONS AND  
ALTERNATIVE A**

FIGURE  
2-1



LOT 1	6.00± ACRES
LOT 2	6.50± ACRES
LOT 3	8.50± ACRES
<b>TOTAL</b>	<b>21± ACRES</b>

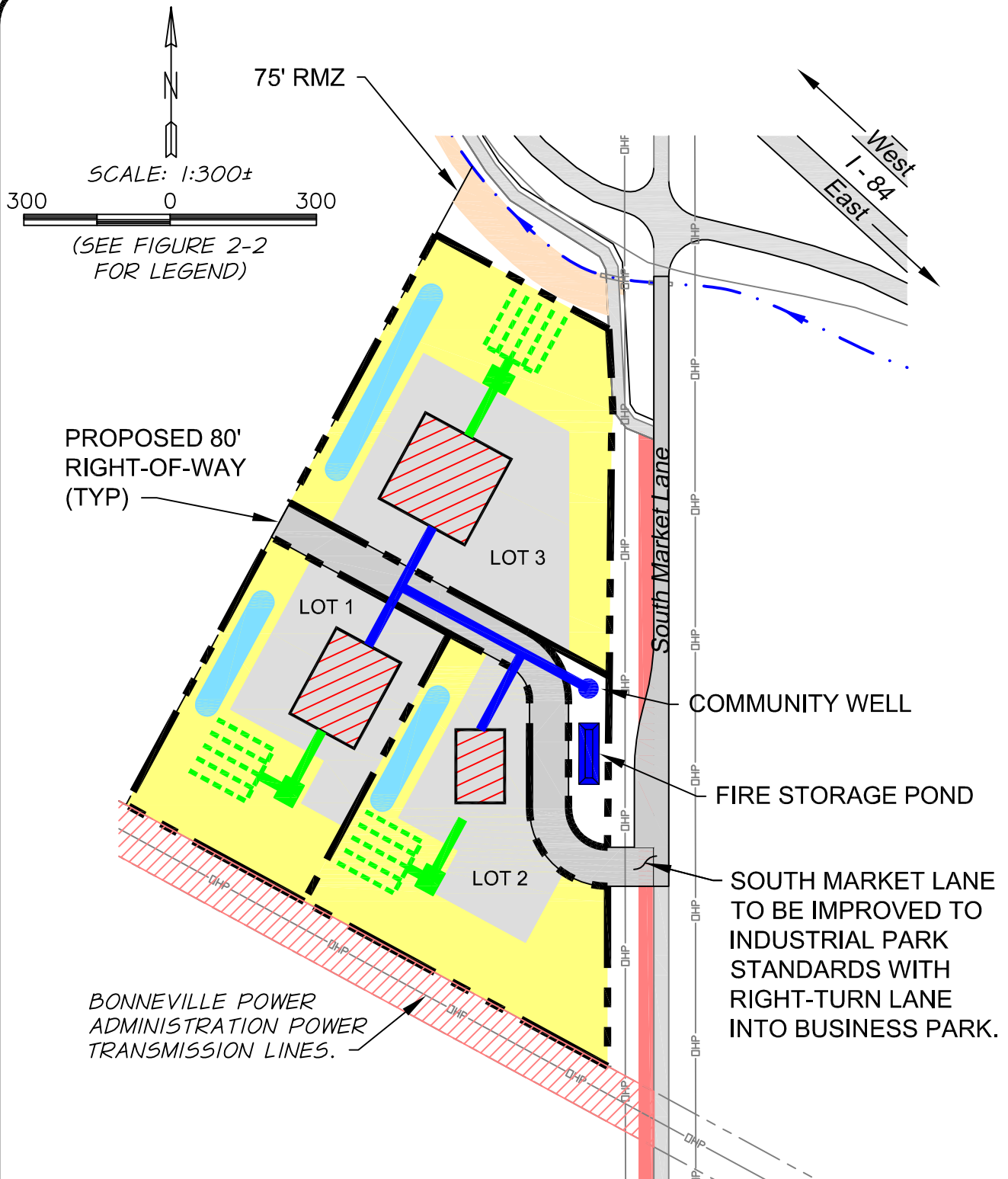
## ALTERNATIVE B

(SEE FIGURE 2-3 FOR DETAIL)

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ENVIRONMENTAL IMPACT STATEMENT  
**SITE PLAN - ALTERNATIVE B**

FIGURE  
2-2



## ALTERNATIVE B DETAIL

### ***Water System and Use***

The proposed water system would be a single well providing service to businesses within the proposed 21-acre development area. Estimated water production necessary from the well would be approximately 40-100 gallons per day for domestic use for all three lots. Total water use would be estimated at 5.6 acre feet per year under Alternative B. Individual businesses within the development area would construct and maintain water lines at their own expense to connect to the well.

Fire protection would be provided by rural fire protection (tanker trucks). Business owners whose operations would require, either as a condition of the Fire Department or their insurer, additional fire flow protection could propose construction of a lined storage pond. These ponds would be constructed by the business owners at their own expense to meet requirements of all applicable Tribal and other regulations. Specification and design of such ponds are not included in the scope of this document as they vary so greatly with business type and facility.

In the future, if a community water system were developed, tenants would be required to connect to it as a condition of their lease. At this point, the well would be required to be capped to prevent contamination, in compliance with appropriate CTUIR water regulations.

### ***Sanitary Sewer Service***

Each business would be served by on-site septic systems, such as septic tanks and drainfields, constructed at lessee expense. Construction and maintenance of on-site septic systems within the Business Park would be regulated by the CTUIR Environmental Health and Safety Code (Chapter 6).

In the future, if a community sanitary sewer system were developed, tenants would be required to connect to it at their own expense as a condition of their lease. Connection to the community system would be required if the total number of employees in the business exceeded 85, or when the CTUIR Tribal Planning Office determines that, according to soil conditions, the parcel is no longer suitable for tanks. At this point, the lessee would also be required to remove septic tanks, in accordance with Tribal Environmental Health and Safety Code (Chapter 6.065).

### ***Surface Water Drainage, Detention, and Retention***

Individual lessees would be required to construct an on-site surface water retention area as described on page 2-5.

The amount of paved or graveled parking area and roof area that would be constructed under Alternative B is conservatively assumed to be 70% (fifteen acres) of total 21-acre development area.

#### ***Road Access and Road System***

An estimated ¼ mile of roadway would be constructed within the business park area to provide access to the three lots.

#### ***Utilities***

See discussion of utility design components common to all action alternatives on page 2-6.

#### ***Patawa Creek Riparian Management Zone, Agricultural Buffer, and Wetlands***

The RMZ would extend 75' from Patawa Creek for a length of approximately 400 feet, for a total RMZ area of approximately .7 acres. This would be on the south side of Patawa Creek only as the access road on the north side, which is in non-CTUIR ownership, precludes an RMZ. See Appendix B for more details on the RMZ. The existing agricultural buffer would remain in effect. There would be no disturbance of existing wetland areas.

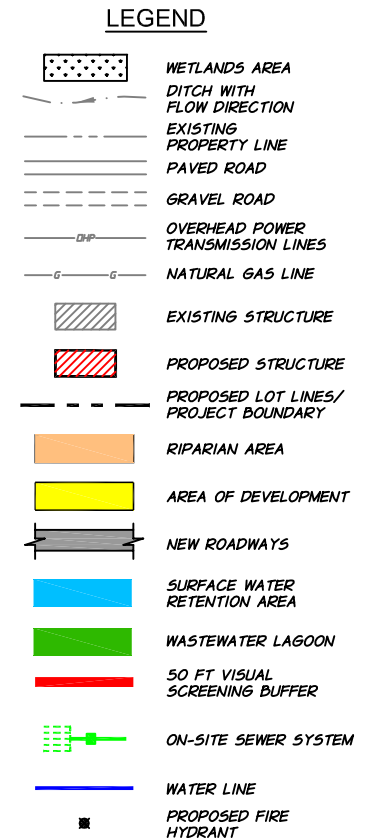
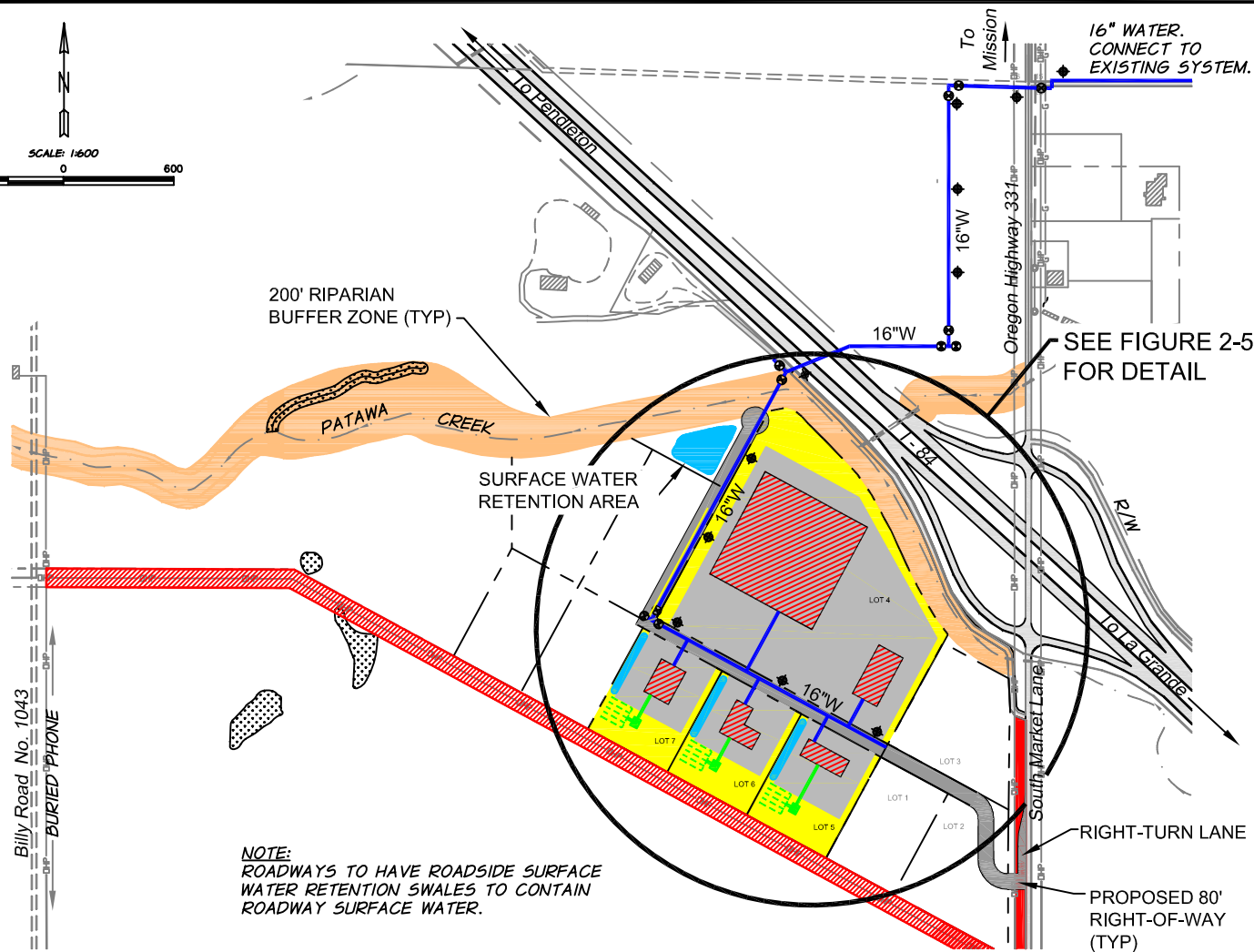
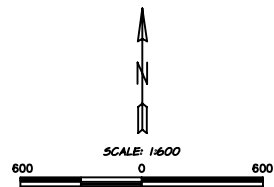
### **Alternatives C and D (58 acres)**

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Alternatives C and D differ only in the proposed wastewater treatment system. (See Alternative C, Figures 2-3 and 2-4, and Alternative D, Figures 2-5 and 2-6). However, this difference in wastewater treatment has implications for projected number of employees since Alternative C's wastewater treatment system would likely accommodate fewer workers than the system proposed under Alternative D (see discussion below.) This difference in number of employees that each Alternative would likely accommodate also has implications for the type of business that would be attracted as an "anchor tenant." As discussed below, Alternative C would be more likely predispose the facility toward light manufacturing instead of warehousing or distribution, while Alternative D, with its increased wastewater capacity, would accommodate both business types.

#### ***Proposed Use, Operations, and Business Facilities***

Proposed use for the property would be the development of approximately fifty-eight (58) acres for a light industrial uses as described on page 2-3. Under this proposal, four lots ranging in size from seven to thirty seven and a half acres would be developed and made available for lease. The proposed building plan includes an "anchor tenant" that would be a warehouse or light assembly facility



## ALTERNATIVE C

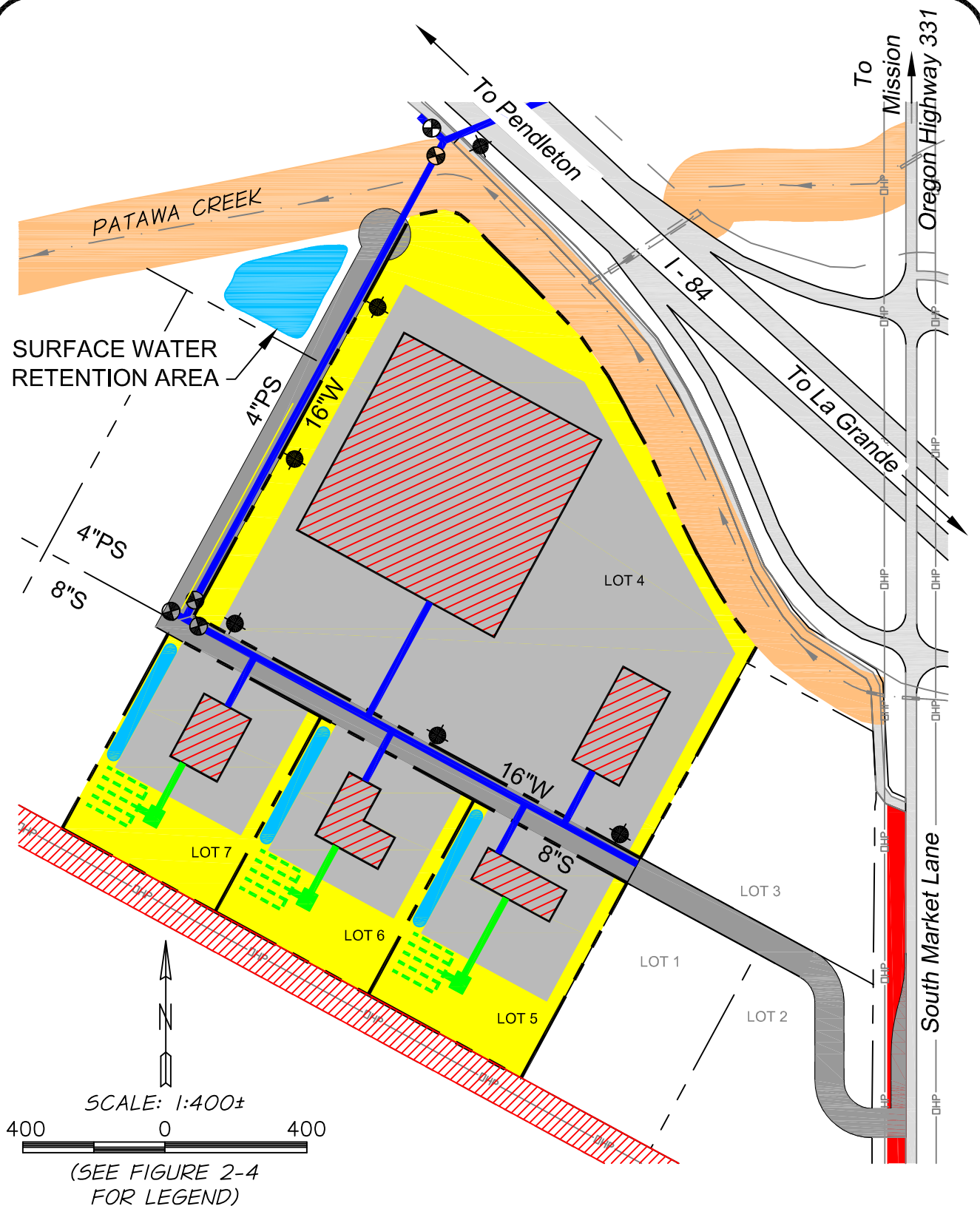
(SEE FIGURE 2-5 FOR DETAIL)

LOT 4	37.0± ACRES
LOT 5	7.0± ACRES
LOT 6	7.0± ACRES
LOT 7	7.0± ACRES
<b>TOTAL</b>	<b>58± ACRES</b>

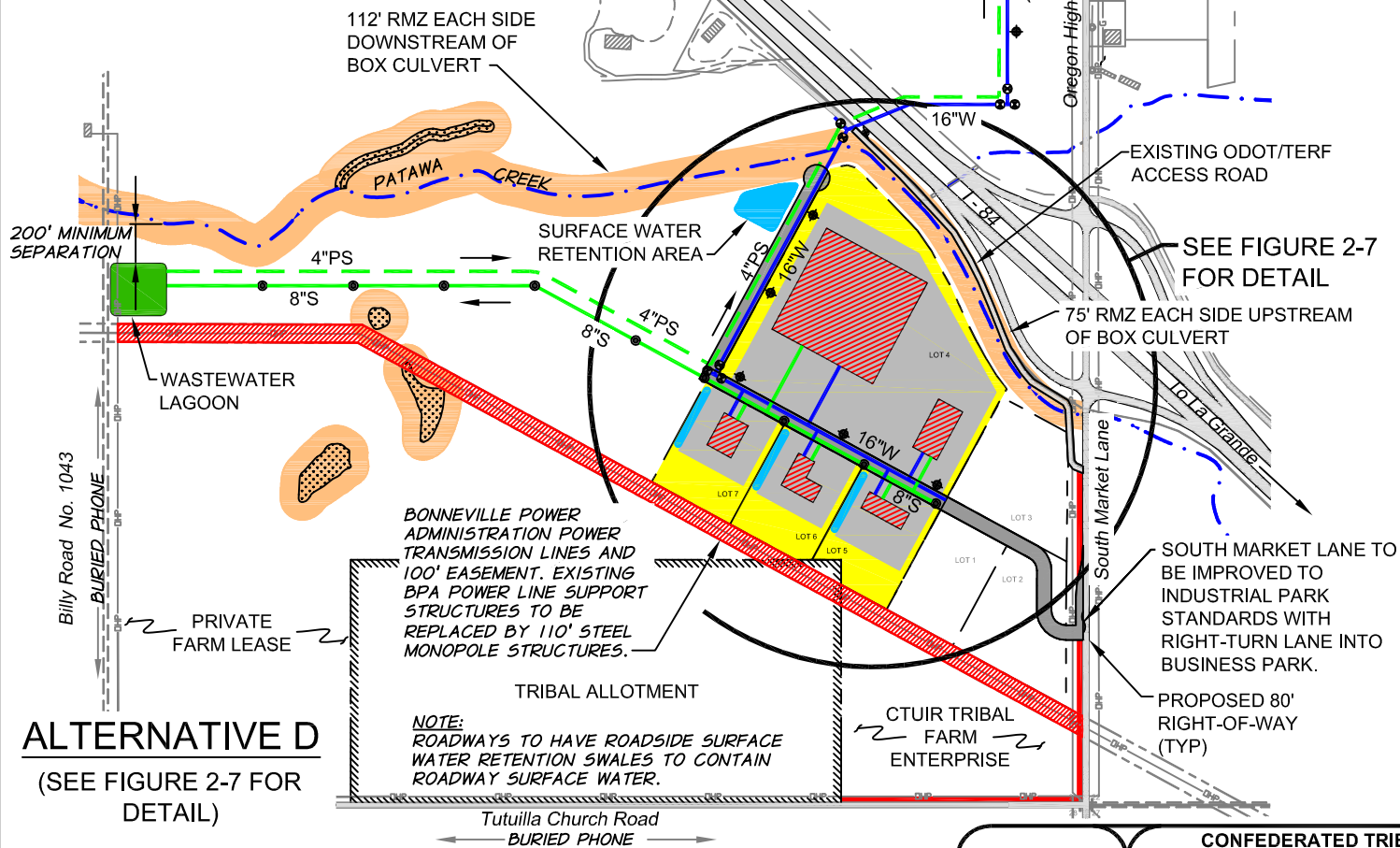
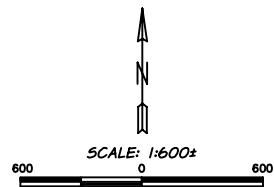
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**SITE PLAN - ALTERNATIVE C**

FIGURE  
2-4



## ALTERNATIVE C DETAIL



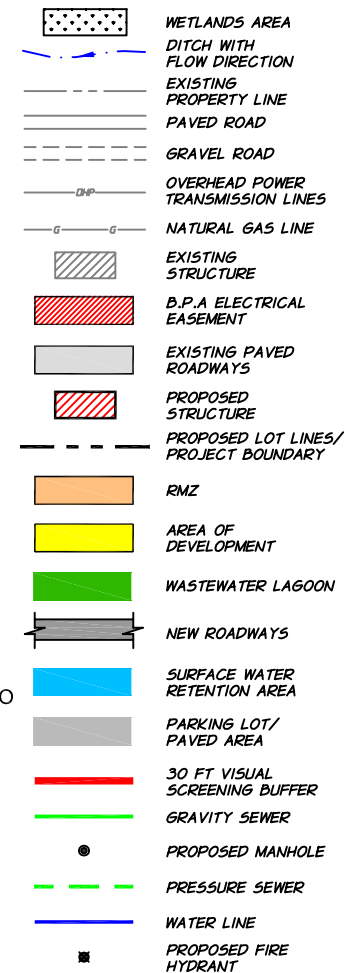
## ALTERNATIVE D

(SEE FIGURE 2-7 FOR DETAIL)

LOT 4	37.0± ACRES
LOT 5	6.7± ACRES
LOT 6	7.0± ACRES
LOT 7	7.0± ACRES
<b>TOTAL</b>	<b>58± ACRES</b>

NOTE:  
ALTERNATIVE D TO UTILIZE COMMUNITY SEWER SYSTEM.

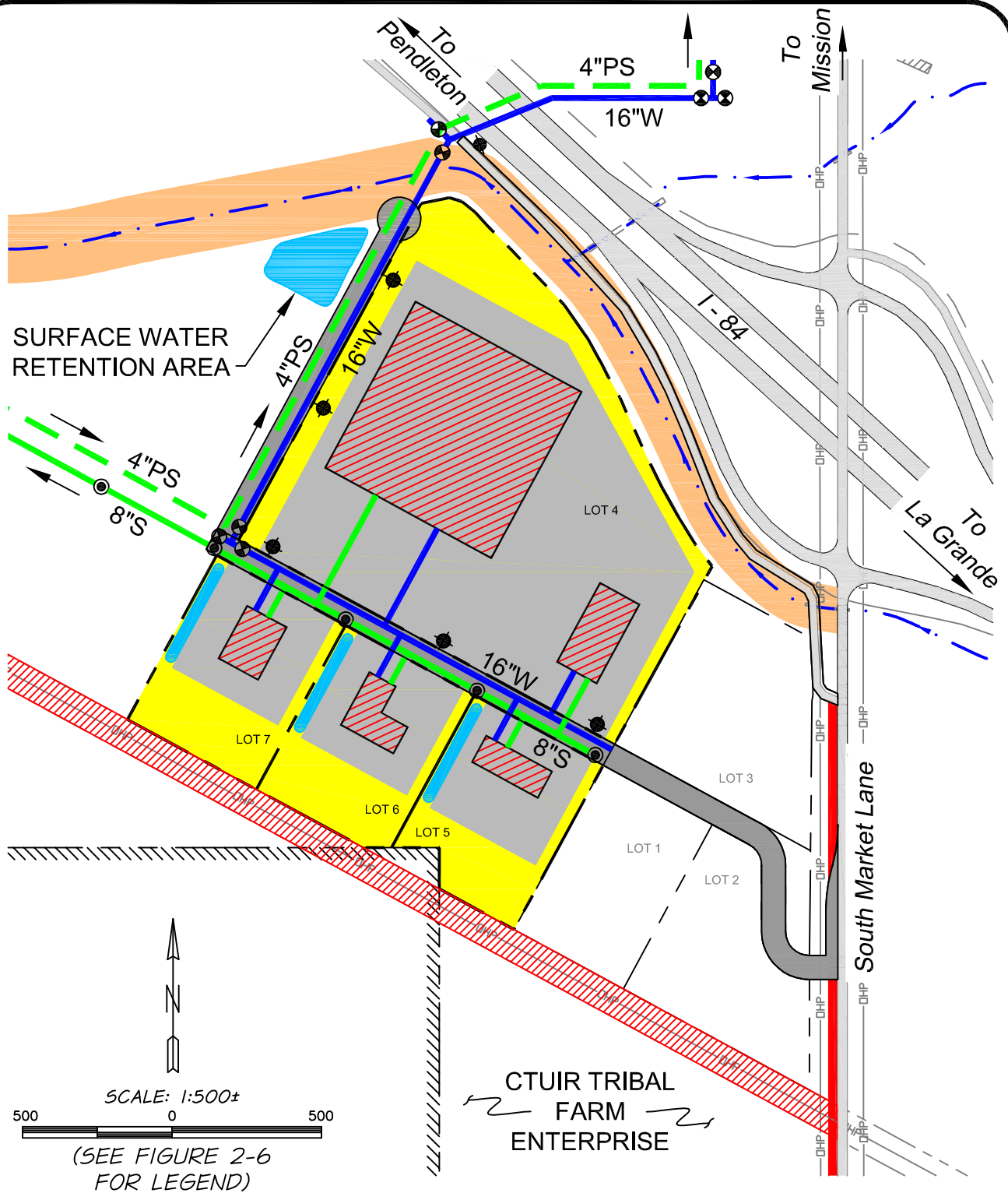
## LEGEND



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**SITE PLAN - ALTERNATIVE D**

FIGURE  
2-6



## ALTERNATIVE D DETAIL

of up to four hundred thousand (400,000) square feet in size on a thirty seven (37) acre parcel. The other three lots would be projected to be leased to smaller business facilities in the 15,000-50,000 square foot range.

Under Alternatives C and D, tractor-trailers would access Interstate 84 directly from South Market Road. Depending on the operation, some tractor-trailers may also travel north on Highway 331 to reach Highway 11 for service to the Walla Walla market area. The proposed operation would likely serve a regional market, and tractor-trailers would not likely travel on local roads beyond accessing the Interstate or Highway 331.

Operations at the other three lots would be projected to be similar to those described in Alternative B.

If required by the lessee, an on-site refueling and light mechanical repair station with gas tanks could be constructed adjacent to the warehouse facility. The fuel tanks would be constructed and operated by the lessee according to all applicable laws as a condition of the lease. The purpose of this facility would be to twofold:

- To provide service to the operation.
- To provide an alternative fueling source in an effort to mitigate for traffic congestion that would otherwise be caused as warehouse-related truck traffic crossed the Interstate to Arrowhead Travel Plaza for fueling purposes.

### ***Water System***

Under Alternatives C and D, tenants would connect to a community water system extension that would convey water from the CTUIR water system north of Interstate 84. The proposed water system improvements consist of connecting to the existing community water system via a new 16-inch water transmission line from the Wildhorse Casino and Resort to the site. This water transmission line would cross under Interstate 84 and Patawa Creek at the location shown in Figures 2-4 and 2-6. The water line would be designed to avoid cultural resources identified north of Interstate 84 (See Section 3.6 for further discussion). Staging areas and transportation routes for the heavy machinery would also be required, as a condition of the construction contract, to avoid these cultural resources.

The water line would be laid at a depth of approximately 4 feet under Patawa Creek. Construction would be open trench during dry in stream conditions in accordance with permit conditions under CTUIR's Water Code.

Hydrants would be constructed, as specified by the Tribal Fire Department, throughout the developed footprint of the park. Fire flows would be provided through the community water system that provides for fire flows through storage in two existing CTUIR reservoirs located approximately two miles northeast of the site.

Estimated total consumptive water demand under Alternatives C and D would be estimated at 10.5 acre feet per year (Alternative C) or 13.54 acre feet per year (Alternative D).

The current water system capacity is discussed in Section 3.12.

#### ***Sanitary Sewer, Alternative C***

The proposed sanitary sewer system would be handled by on-site disposal (septic and drainfield) just as in Alternative B. Flow size determines that an on-site wastewater system would be considered a “large” system and would require a certified operator once the number of employees served by the system reaches 85 as per the Tribal Environmental Health and Safety Code. Warehousing operations are the only business types proposed for the business park that would be likely to employ more than 85 employees on a start up basis.

Alternative C would not be a viable option for warehousing operations, but would likely be viable for light manufacturing and assembly business types, which typically employ fewer than 85 people in Eastern Oregon (Jill Miles, State of Oregon Regional Business Development Officer, Personal Communication).

#### ***Sanitary Sewer, Alternative D***

Under this alternative, CTUIR would construct a collection system with lift stations to pump wastewater to the existing trunk line that runs to the City of Pendleton’s wastewater treatment system. A lagoon would be constructed at the westernmost and lowest area of the site for the purpose of attenuating peak flows, removing solids, and achieving some preliminary treatment to reduce odors. This lagoon would be located a minimum of 200 feet away from Patawa Creek. Wastewater would then be pumped from the lagoon by a new lift station through a new 4-inch forcemain connected to the existing 4-inch forcemain for discharge into the community trunk line. The lagoon would be constructed according to all applicable laws and would be lined to prevent leakage into groundwater. The pressure sewer line would be designed and constructed to avoid cultural resources north of Interstate 84.

Current wastewater system capacity is discussed in Section 3.12.

### **Roads and Road Access**

Internal roadways within Coyote Business Park would be constructed as shown in Figures 2-4 and 2-6. Roads would be an estimated ½ mile in length.

~~In order to fully comply with the access management policy of the 1999 OHP, the existing access to South Market Road serving the CTUIR waste transfer station and ODOT sand shed would be eliminated and all traffic related to both facilities would be rerouted to the proposed site access driveway to South Market Lane via an internal connection within the proposed business park.~~

~~This connection would require construction of a new crossing of Patawa Creek. The width of the bridge would be approximately 40 feet to match the width of the roadway sections planned for the business park. The bridge span would be approximately 25 feet. The bridge deck would consist of precast, prestressed concrete slabs. The abutments would be supported on concrete spread footings, which are anticipated to be at a depth of approximately 10 feet below the existing ground surface and a minimum of 4 feet below the channel bottom.~~

~~Construction of the bridge within the streambanks would comply with all applicable requirements, including the CTUIR Water Code, and would occur during periods when Patawa Creek was dry. Streambanks would be disturbed on either side of Patawa Creek for a length of 80 feet. Silt fence and other appropriate erosion control measures would be utilized during construction to minimize impacts to the streambed. Upon completion of work in the stream channel, all disturbed areas would be restored utilizing erosion control matting, re-seeding, etc.~~

### **Surface Water**

In addition to the on-site surface water retention areas that individual lessees would construct (see page 2-5), construction of the larger warehouse or light industrial operation proposed under Alternatives C and D would trigger CTUIR-financed construction of an additional regional storm water collection and retention system for the larger area. Swales approximately 2 feet deep with 4:1 side slopes would be constructed to convey surface water to a downstream point. These swales would be seeded with drought-resistant bunch grasses (e.g., sheep fescue) that would allow sediments and potential surface water contaminants to be filtered as they travel downstream.

An estimated four detention ponds would be constructed to receive surface water from these swales. The purpose of the ponds would be to allow any contaminants to settle out, and to minimize flows to

Patawa Creek. The ponds would have a lower storage component with a sediment baffle wall to allow sediments to settle out, and an upper storage component to detain runoff from large storm events. The ponds would be designed and constructed to detain surface water, which means that flows of water into the surrounding area would be allowed. However, they would be designed in accordance with best practices design standards for stormwater detention so that discharge would not exceed the pre-developed flow from a 10-year storm event. The ponds would be located a minimum of 100 feet from Patawa Creek.

The detention ponds would be configured to take advantage of the slope of the land and balance excavation work. This would be achieved by cutting into the uphill side of the pond and using the excess material as fill for the downhill side dike. All of the ponds would be seeded with drought-resistant bunch grasses and maintained by CTUIR.

### ***Utilities***

The existing Bonneville Power Administration (BPA) lines that cross the site are currently supported by twelve wooden “H-Frame” structures. The BPA lines are approximately 60’ high. The angle change that the line makes as it crosses the site is anchored by guy wires on the corner pole.

These supports would be replaced by 7-9 single steel pole suspension structures that would increase the clearance between the power lines and the ground from 60 feet to approximately 110 feet (see Figure 2-10 for a picture of similar poles). These structures would be direct buried, to a depth of 15 to 20 feet in a hole with a diameter of 6 feet. An area of approximately 150’ x 150’ under each structure would be used for a staging area. The existing access road system would be used and no power line upgrades are planned. In addition, three new “dead-end” poles on concrete foundations would be constructed. These poles would look like all the others but have extra reinforcement whenever there is an angle change in the line or change in tower support type. The “dead-end” poles are buried 30 feet deep with a steel and concrete footing.

This upgrade would allow for more flexibility in use of the site by increasing the clearance and reducing the footprint of the power line, thus expanding options for future parking and or transportation under the access line.



**Figure 2-10, Steel Pole Power lines (example)**

***Patawa Creek Riparian Management Zone, Agricultural Buffer, and Wetlands***

The RMZ would extend 225' (total on both sides) from Patawa Creek, for a total RMZ area of approximately 29 acres, including land north and south of Patawa Creek. (Appendix B provides more details on the RMZ.) The existing agricultural buffer would no longer be maintained since its area would be replaced in its entirety by the RMZ. The isolated wetlands on the parcel would not be disturbed and a 100' buffer around them would be observed so as to avoid impacts during construction activities.

## **Alternative E (142 acres)**

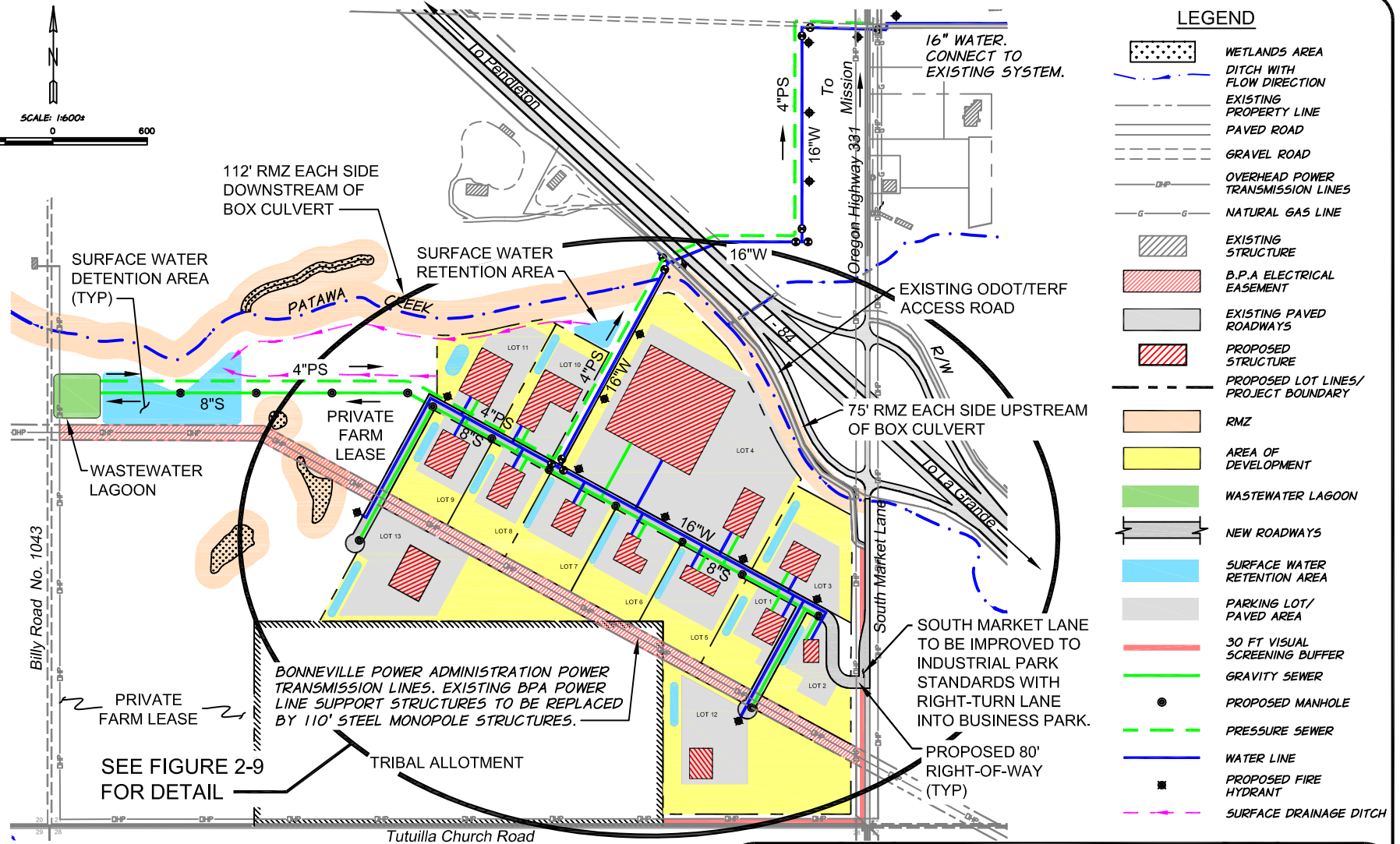
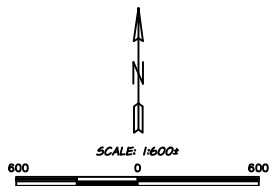
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***Proposed Use, Operations, and Building Facilities***

The size of the developed area would be a total of 142 acres (Figures 2-8 and 2-9). The proposed use for the property includes all of the light industrial and warehousing uses described in action Alternatives B, C and D as well as development of approximately sixty-three (63) additional acres. The primary difference between Alternative E and the other alternatives is the size of the total developed area, and the scale of the water, sewer, and road system developed.

Under this proposal, thirteen lots ranging in size from six to thirty nine acres would be developed and made available for lease.

Building size would be projected to range from 15,000 square feet to up to 400,000 square feet for a distribution warehouse type operation as an anchor tenant. A distribution warehouse or similar operation would potentially also construct a bulk fueling station. The purpose of this station would be to provide fuel service on-site and thus reduce the traffic impact of a fleet of trucks fueling at Arrowhead. The projected building type would be steel or wood frame with concrete floors, although larger buildings may be tilt-up concrete or similar. Many of the buildings may be elevated to provide loading dock access.



**NOTE:**  
ROADWAYS TO HAVE ROADSIDE SURFACE  
WATER RETENTION SWALES TO CONTAIN  
ROADWAY SURFACE WATER.

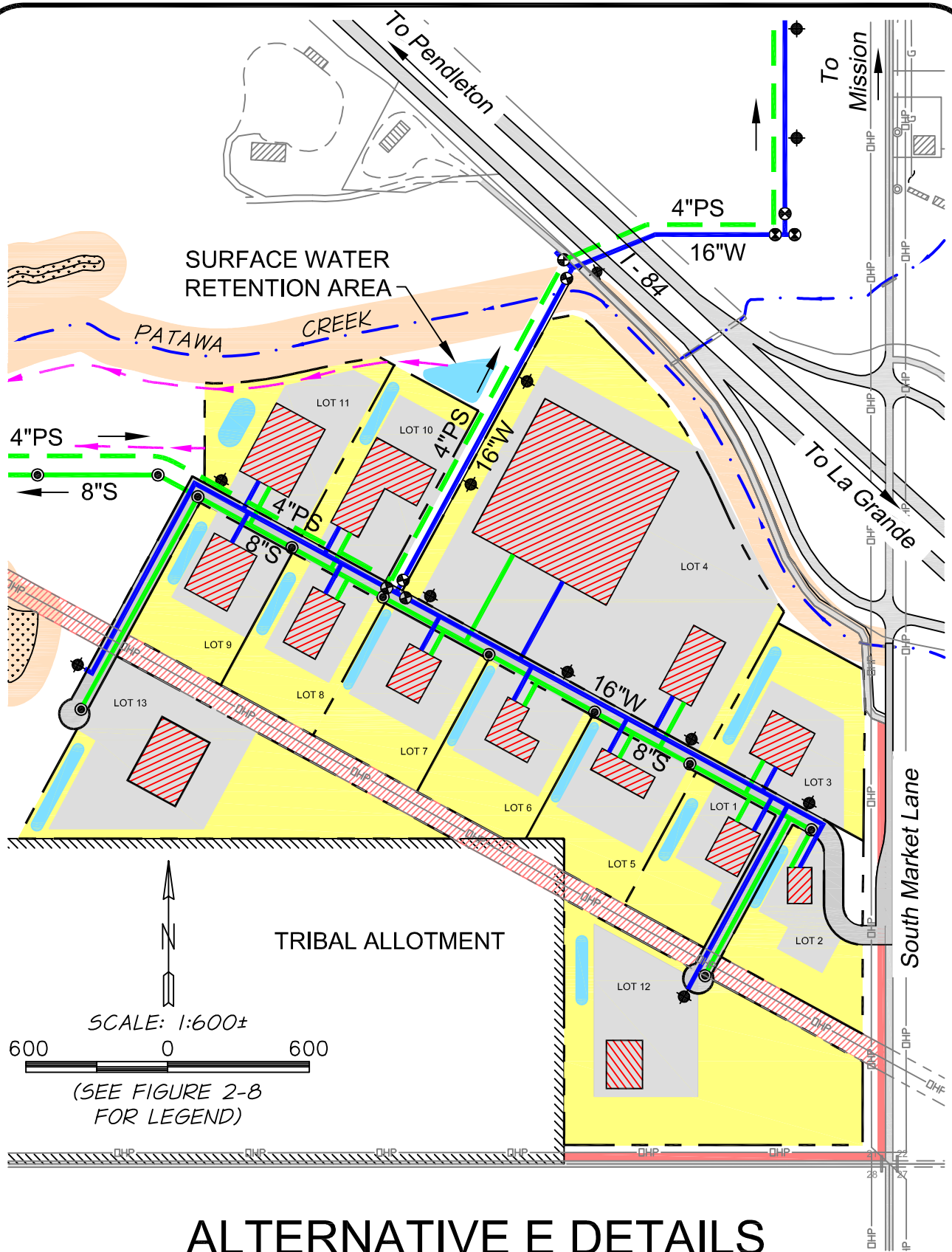
## ALTERNATIVE E

(SEE FIGURE 2-9 FOR DETAIL)

**ap** anderson  
perry  
& associates, inc.

CONFEDERATED TRIBES OF THE  
UMATILLA INDIAN RESERVATION  
COYOTE BUSINESS PARK  
ENVIRONMENTAL IMPACT STATEMENT  
**SITE PLAN - ALTERNATIVE E**

FIGURE  
2-8



## ALTERNATIVE E DETAILS

**Water System**

The proposed water system is similar to that in Alternatives C and D. The distribution system would be more extensive to meet the needs of the lessees as shown in Figure 2-5. Under Alternative E, tenants would connect to a community water system extension that would convey water from the Tribal water system north of Interstate 84. The proposed water system improvements consist of connecting to the existing community water system via a new 16-inch water transmission line from the Wildhorse Resort to the development area of the site. This water transmission line would cross under Interstate 84 and Patawa Creek at the location shown on Figure 2-5. The water line would be designed to avoid cultural resources identified north of Interstate 84. Staging areas and transportation routes for the heavy machinery would also be required, as a condition of the construction contract, to avoid these cultural resources.

The water line would be laid at a depth of approximately 4 feet under Patawa Creek. Construction would be open trench during dry in-stream conditions in accordance with Tribal Water Code.

**Sanitary Sewer**

The proposed sanitary sewer system would be similar to that in Alternative D although more extensive to provide service to the entire developed area.

Under Alternative E, CTUIR would construct a collection system with lift stations to pump wastewater to the existing trunk line that runs to the City of Pendleton's wastewater treatment system. A lagoon would be constructed at the westernmost and lowest area of the site for the purpose of attenuating peak flows, removing solids, and achieving some preliminary treatment to reduce odors. This lagoon would be located a minimum of 200 feet from Patawa Creek. Wastewater would then be pumped from the lagoon by a new lift station through a new 4-inch forcemain connected to the existing 4-inch forcemain for discharge into the community trunk line. The lagoon would be constructed according to all applicable laws and would be lined to prevent leakage into groundwater. The pressure sewer line would be constructed to avoid cultural resources north of Interstate 84 (see Section 3.6).

The system would be planned to provide service to the entire project area but would be built in phases to accommodate development over time.

### ***Surface Water Drainage and Retention***

The proposed surface water drainage and retention system is the same as in Alternatives C and D, although it would accommodate the larger development of 142 acres.

In addition to the on-site surface water retention areas required of each lessee as described on page 2-5, under Alternative E, CTUIR would construct an additional regional storm water collection and retention system for the larger area. Swales approximately 2 feet deep with 4:1 side slopes would be constructed to convey surface water to a downstream point. These swales would be seeded with drought-resistant bunch grasses (e.g., sheep fescue) that would allow sediments and potential surface water contaminants to be filtered as they travel downstream.

An estimated four detention ponds would be constructed to receive surface water from these swales. These ponds are shown conceptually as a single area on Figure 2-5. The purpose of the ponds would be to allow any contaminants to settle out, and to minimize flows to Patawa Creek. The ponds would have a lower storage component with a sediment baffle wall to allow sediments to settle out, and an upper storage component to detain runoff from large storm events. The ponds would be designed and constructed to detain surface water, which means that flows of water into the surrounding area would be allowed. However, they would be designed in accordance with best practices design standards for stormwater detention so that discharge would not exceed the pre-developed flow from a 10-year storm event.

The detention ponds would be configured to take advantage of the slope of the land and balance excavation work. This would be achieved by cutting into the uphill side of the pond and using the excess material as fill for the downhill side dike. All of the ponds would be seeded with drought-resistant bunch grasses and maintained by CTUIR. Ponds would be located a minimum of 100 feet from Patawa Creek.

### ***Roads and Road Access***

An internal road circulation system would be constructed, of approximately 1 mile in length.

~~In order to fully comply with the access management policy of the 1999 OHP, the existing access to South Market Lane serving the CTUIR waste transfer station and ODOT sand shed would be eliminated and all traffic related to both facilities would be rerouted to the proposed site access driveway to South Market Road via an internal connection within the proposed business park.~~

~~This connection would require construction of a new crossing of Patawa Creek. The width of the bridge would be approximately 40 feet to match the width of the roadway sections planned for the business park. The bridge span would be approximately 25 feet. The bridge deck would consist of precast, prestressed concrete slabs. The abutments would be supported on concrete spread footings, which are anticipated to be at a depth of approximately 10 feet below the existing ground surface and a minimum of 4 feet below the channel bottom.~~

~~In order to comply with all applicable regulations, including the CTUIR Water Code, construction of the bridge within the stream banks would occur during periods when Patawa Creek was dry. Stream banks would be disturbed on either side of Patawa Creek for a length of 80 feet. Silt fence and other appropriate erosion control measures would be utilized during construction to minimize impacts to the streambed. Upon completion of work in the stream channel, all disturbed areas would be restored utilizing erosion control matting, re-seeding, etc.~~

Two improvements would occur on South Market Road. At the proposed intersection of the site access driveway and South Market Road, an exclusive southbound right-turn lane would be constructed to facilitate right-turn movements into the development site. This turn lane would be established to facilitate safe and efficient movement of vehicles into the site, particularly large trucks that would need ample space and distance to decelerate when turning. The recommended turn lane would ensure that other vehicles continuing southbound along South Market Road would not be delayed by slower moving vehicles turning into the site. In addition, the surface of South Market Road between the new access site and the beginning of Highway 331 (a distance of approximately 1,320 feet) would be improved to an industrial standard. ***These improvements would occur in 2008 as part of the Oregon Transportation Investment Act (OTIA) project planned for this area; or as funding becomes available.***

### ***Utilities***

The existing BPA lines that cross the site are currently supported by wooden structures. These supports would be replaced by metal structures that would increase the clearance between the power lines and the ground from 60 feet to 110 feet. This upgrade would increase flexibility of the site for future use and reduce the footprint of the support towers.

### ***Patawa Creek Riparian Management Zone, Agricultural Buffer, and Wetlands***

The RMZ would extend 225' (total on both sides) from Patawa Creek between Billy Road on the western edge of the site and the confluence with the unnamed tributary; and 150' from the creek between that confluence and South Market Road on the eastern edge of the site, for a total RMZ area of approximately 29 acres on both sides of the creek. See Appendix B for more details on the RMZ. The agricultural buffer would no longer be maintained since its area would be replaced in its entirety by the RMZ. The isolated wetlands on the parcel would not be disturbed and a 100' buffer around them would be observed with regard to any construction activities.

## 2.4 Proposed Mitigation Measures

Alternatives B, C, D and E would include the following Mitigation Measures (see Table 2-6).

### Water Resources

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Direct impacts to Patawa Creek from construction of the proposed bridge and utility lines would be reduced or avoided by proper design and construction. After the trench was backfilled, the structure of the soil would be disturbed and the trench would be a soft point in the channel bed, banks and floodplain. During flow events that are at bankfull or greater, there would be the potential for channel and floodplain erosion at this point. Soil in the trench would be replaced in a manner that minimizes this risk. The soil would be sorted by depth and/or size class so that when it is replaced it would closely match the existing soil profile. This would be especially important in the active channel where the highest erosion potential exists. The soil would also be replaced so that the permeability is closely matched (through compaction) with surrounding soils and the ground profile is smooth. Finally, the area would be planted with native riparian vegetation or appropriate vegetation that would function to provide channel and bank stability.

~~Mitigation for the bridge construction would include appropriate drainage structuring around the bridge and associated road so that the amount of drainage water running directly to the channel would be minimized. Any disturbed areas that are not hardened as part of the bridge structure would need to be planted with native vegetation that is appropriate for the site. The abandoned ODOT road would be reclaimed and returned to natural contour and compaction. This means that the asphalted surface would be removed, the road bed leveled and the compacted path subsoiled and planted with native vegetation. This would mitigate for the newly compacted area that is created by the new road.~~

Because of the uncertainty of groundwater conditions beneath the proposed Coyote Business Park and the proximity of the park to Mission

Well #5, wellhead protection measures would be implemented to protect groundwater quality and supply. Best management practices (BMP) for businesses are provided in Appendix C (DEQ 1996). Although these practices have not been formally adopted by the CTUIR, they would be used in the construction and operation of the businesses developed at Coyote Business Park.

Bank and channel erosion resulting from the location of ~~a bridge~~ the utility trench across Patawa Creek could be avoided through appropriate ~~bridge~~ design and construction management. Critical elements in avoiding impact include:

- Operator must ensure that instream work is completed within the designated work window.
- Turbidity caused by instream operation should not exceed a 10% increase as measured above and below operation for a designated period of time.
- Operator must ensure that all petroleum products do not enter the riparian area or waterway and all fueling is done outside of the RMZ. Operator would be required to have absorbent booms on-site of adequate size to contain a fuel/oil spill.
- Equipment would need to be clean and leak-free in order to work within RMZ.
- Disturbed areas and stockpiles must be protected or covered if left unattended to ensure that sediment does not reach the channel in a sudden precipitation event.
- A hazmat spill plan must be completed and on site during operation.

A Pollution Prevention Plan would be required for each construction element. This Plan would be completed by the contractor as required by CTUIR Water Resources Department and the EPA.

Herbicidal control of noxious weeds proposed in the development and maintenance of the RMZ would be used under Best Management Practices for safe application and appropriate labeling guidelines.

## **Biological Resources**

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A noxious weed control plan would be adopted and implemented in all phases of the project (construction & operational.)

## **Air Quality**

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### ***Construction Mitigation***

Dust control is proposed as mitigation to minimize the impacts of construction-related fugitive dust emissions. These may include periodic watering of haul roads and storage piles, controlling traffic speed limits, attending to “track-out,” and use of soil amendments.

Best management practices to control dust during construction would be required as part of the general construction contract both for infrastructure and for individual building construction. Businesses producing air emissions would be required to use state-of-the-art air emissions control technology to arrest and control air emissions.

### ***Operations Mitigation***

Once construction is complete, proposed mitigation for soil and landscapes would be to stabilize and plant with native species to minimize fugitive dust emissions.

The volatile organic compounds (VOC) emissions from refueling could be reduced by reducing the amount of fuel and implementing best management and emissions control technology.

Air emissions from mobile sources could be reduced by encouraging the use of fuel efficient vehicles, reducing number of trips made, and substituting alternative fuels.

## **Cultural Resources**

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All tribal and federal laws regarding protection of cultural resources would be followed during construction and operation of the Coyote Business Park. Information on applicable tribal and federal laws regarding protection of cultural resources, and on general procedures in place for inadvertent discoveries of ancestral remains are contained in Section 3.6.

To the extent feasible, proposed ground-disturbing activities would be designed to avoid all cultural resource sites and a buffer would be established around each in consultation with the THPO. Known cultural resource sites and isolated finds would be avoided whenever possible by the design of proposed infrastructure and business construction. If this

proves not to be feasible, mitigation measures would need to be determined in consultation with the THPO and lead federal agency.

In order to comply with applicable federal and tribal laws protecting cultural resources, a project that encounters buried cultural resources in the midst of construction would need to halt construction in that area until the resource could be assessed. Pre-construction survey and shovel testing is one way to help identify buried cultural resources, but there is no technology that can completely rule out the possibility of encountering buried cultural resources in advance of construction.

Prior to Phase I, shovel testing would occur in the footprint of the ground-disturbing portions of the proposed development to identify any buried cultural resources. The amount of shovel testing necessary would increase with the size of the development. Information regarding the placement of agricultural tiles in portions of the project area suggests that there may have been disturbance in excess of four feet below the surface in some areas. If additional information comes to light, such as the exact location of these areas of disturbance, some testing may not be necessary because of the disturbed nature of the sediments. If cultural resources were identified in the course of shovel testing, applicable federal and tribal laws protecting cultural resources would be followed. A CTUIR Cultural Resources Protection Program monitor would be present during all ground-disturbing activity. Language specifically protecting cultural resources would be included in all leases.

The ***Cultural Resources Protection Program*** (CRPP) would recommend the type of investigation needed to determine whether the cultural resource sites are eligible for inclusion in the National Register. It would be necessary to mitigate any adverse effects to eligible sites. The THPO and the lead federal agency would need to concur with any mitigation measures.

~~If the existing power line, which is older than fifty years of age, were upgraded as proposed in Alternatives C, D, and E, then the line would need to be properly recorded on a Section 106 Documentation Form and Level of Effect Form. A formal determination of eligibility would need to be made and mitigation measures developed as necessary in consultation with the Tribal Historic Preservation Officer and the lead federal agency prior to any changes to the line.~~

~~Prior to construction, CTUIR would conduct oral history research to determine if any traditional cultural properties would be adversely affected by the proposed project. If traditional cultural properties are identified that would be adversely affected by the proposed undertaking, mitigation~~

~~measures would be determined in consultation with the THPO and lead federal agency.~~

***CTUIR would develop a plan to address the proposed development's impact on the viewshed. The plan would include recommendations for landscaping and appropriate earth-toned building colors.***

The leases for the individual parcels would prohibit disturbance of cultural resources that may be present on the lots, and requiring consultation with THPO prior to any ground-disturbing activity.

***Impacts to cultural resources inadvertently discovered during construction***

It is the Tribes' goal to protect cultural resources in place if possible. As such, if buried cultural resources were found during construction, the lead federal agency and CRPP would develop a plan, if necessary, to mitigate the effect to the resource and submit this plan to the THPO for approval. Generally, the plan would redesign the project to protect the resource or require data recovery. Data recovery could take the form of documentation and/or excavation of the find. Because buried cultural resources vary so greatly in their type and scope, it is not feasible to identify in advance if project redesign or data recovery would be the best option.

If ancestral remains were to be uncovered during construction, the *Confederated Tribes of the Umatilla Indian Reservation Policy and Procedure Manual for the Repatriation of Ancestral Human Remains and Funerary Objects* would be followed as well as other applicable tribal and federal laws.

***Mitigation for impacts to the Power Structure Upgrade***

~~The existing power line may be an historic property. Under Alternatives C, D, and E, the line would be properly recorded on a Section 106 Documentation Form and Level of Effect Form. Prior to any changes in the line, a formal determination of eligibility would need to be made and mitigation measures developed as necessary in consultation with the Tribal Historic Preservation Officer and the lead federal agency.~~

## **Transportation**

Under all alternatives, Highway 331 overpass improvements are recommended to improve the existing sight distance deficiency. It is recommended that ODOT periodically monitor safety and traffic volumes at the interchange to determine if and when improvements such as a traffic signal or overpass reconstruction would be warranted.

Under Alternatives B, C, D, and E, ODOT and CTUIR would implement a traffic speed study to consider the need for reduced speeds across the I-84 interchange. ODOT would be requested to monitor traffic at the I-84 interchange to assess the need for signals at the off-ramps. Eventual ODOT reconstruction of the overpass to reduce curvature and improve safety and sight distance is further recommended.

~~Under Alternative E, a traffic signal would be installed at the eastbound off ramp at I-84, approximately four years after the full build out of the site.~~  
***If a traffic signal study found that signal warrants are met under Alternative E, a signal would be constructed by the parties involved.***

## Visual Impact

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***CTUIR would develop a plan to address the viewshed impact of the proposed development, including landscaping, light pollution, and appropriate building colors.*** Landscaping would be planted and maintained along the southern and eastern side of the parcel, parallel to South Market Lane and to Tutuilla Church Road, in an irrigated buffer strip of approximately 30 feet wide as shown in Figure 2-2.

Light pollution and its adverse effects from the business park would be partially mitigated by following recommendations in the New Jersey Light Pollution Study Commission report (see Appendix E) regarding minimization of misdirected lighting.

***Lessees would be required to ensure that buildings and other improvements are painted neutral or earth-tone colors so as to minimize additional visual impact.***

## Socioeconomic

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CTUIR would need to aggressively implement education and job training programs to ensure maximum CTUIR member benefit from proposed job creation.

## Tribal Employment Rights Office and Tribal Benefit

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The following provisions would be integrated into all planning, construction, and operations of any of the build alternatives.

- Preference for tribal entrepreneurs in leasing lots and operating businesses at the business park.
- Preference for Native Americans in employment and training; and preferential contracting with TERO-certified Indian-owned businesses in all construction activities occurring on the site.

- Preference for Native Americans in employment, training and contracting opportunities in all business activities occurring on the site.
- Assessment of TERO fees for contracts beginning at \$10,000 or more, for programs and services, according to TERO Code, Chapter III.
- Contract documents for construction and businesses that include TERO provisions identifying TERO obligations and request proposals/plans addressing how they intend to meet those obligations for employment, training, and contracting.

## 2.5 Comparison of Project Elements by Alternative

The following tables provide a comparison summary of the project design elements of each alternative. Table 2-2 lists project improvements by funding source for each alternative. Table 2-3 lists project design elements by alternative.

**Table 2-2**  
**Summary of Project Improvements by Alternative**  
**and Funding Source**

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Road Improvements	None	CTUIR and ODOT (through OTIA III)			
Water Service to lot line	None	CTUIR	CTUIR	CTUIR	CTUIR
Sanitary Sewer	None	Lessee	Lessee	CTUIR	CTUIR
Storm Water Drainage on lot	None	Lessee			
Regional Storm Water Drainage system	None	CTUIR			
Utilities	None	Trenching- CTUIR Utility Service- Individual Utility Providers			
			Power Structure Upgrade- Bonneville Power Administration		
Riparian Management Zone (RMZ)	Agricultural Buffer maintained by CTUIR Tribal Farm Enterprise	Agricultural Buffer maintained by CTUIR Tribal Farm Enterprise		RMZ maintained by CTUIR	
Visual Buffer and Roadside	None	CTUIR			

landscaping		
On-site landscaping	None	Lessee

**Table 2-3 Alternative Comparison**

	<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>
<b>Size of developed area &amp; proposed uses</b>	<p>"No Action" Alternative (0 acres developed)</p> <p>No development of infrastructure or buildings.</p> <p>Land continues to be farmed in dryland crops.</p> <p>No new businesses are located on the site.</p>	<p>Total of 21 acres developed.</p> <p>Light industrial buildings (Specific uses as allowed by Land Development Code)</p> <p>Estimated number of businesses: up to three (based on capacity of distribution system from single well).</p>	<p>Total of 58 acres developed.</p> <p>Light industrial buildings (Specific uses as allowed by Land Development Code)</p> <p>Includes construction and operation of a light industrial/warehouse of up to 400,000 square feet with associated parking and industrial refueling/ truck repair facility (approx. 40 acres)</p> <p>Estimated number of businesses: four</p>		<p>Total of 142 acres developed.</p> <p>Light industrial buildings (Specific uses as allowed by Land Development Code)</p> <p>Light industrial/warehouse up to 400,000 square feet with associated parking and industrial refueling/ truck repair facility (approx. 40 acres)</p> <p>Estimated number of businesses: thirteen</p>
<b>Water System for domestic water and fire flow protection</b>	<p>No wells constructed and no extension of community water system to the site</p>	<p>Construction of single well (estimated depth 200-300 feet) to provide domestic water and fire flow protection to up to three businesses.</p> <p>Fire protection provided by rural fire service and potentially by lessee-built covered reservoir (pond).</p>	<p>Extend community water system across Interstate and throughout proposed development area with underground crossing of Interstate and Patawa Creek.</p> <p>Fire protection provided by hydrants.</p>		

**Table 2-3 Alternative Comparison**

	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Sanitary Sewer	No business construction or operations at the site, and therefore no sanitary sewer or drainfield system construction.	Construction of individual on-site disposal systems (septic and drainfield) for up to three businesses.	Construction of individual on-site disposal systems (septic and drainfield) for handling up to 85 employees for up to four businesses.	Connect to Mission Community Water and Sewer system via pressure sewer for domestic and commercial waste water. Construct primary treatment lagoon.	Connect to Mission Community Water and Sewer system via pressure sewer for domestic and commercial waste water. Construct primary treatment lagoon.
Surface Water Drainage and Retention	No storm runoff facilities are constructed and runoff into Patawa Creek continues at its current rate.	Construct surface water detention ponds and roadside swales to match pre-development runoff conditions.  Ponds and swales are constructed to accommodate an estimated 15 acres of impermeable surface with no runoff to Patawa Creek (paved or graveled parking area and roof area is assumed to be 70% of total 21 acre developed area.)	Construct surface water detention ponds and roadside swales to match pre-development runoff conditions.  Ponds and swales are constructed to accommodate an estimated 41 acres of impervious surface with no runoff to Patawa Creek (paved or graveled parking or roof area assumed to be 70% of total 58 acre developed area).	Build retention pond to store runoff from entire site at south end of industrial property.  Ponds and swales are constructed to accommodate an estimated 97 acres of impervious surface with no runoff to Patawa Creek (paved or graveled parking or roof area assumed to be 70% of total 139 acre developed area.)	
Power Structure for High Voltage Power Lines	None. BPA high voltage power lines continue to cross site on existing structures.		BPA high voltage lines continue to cross site but 7-9 wooden structures would be replaced by steel monopole structures.		

**Table 2-3 Alternative Comparison**

	<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>
<b>Road Access and System</b>	No new roads or access points are constructed.	Construct new access point in accordance with all applicable laws and regulations, and construct approximately ¼ mile of roadway.	Construct new access point in accordance with all applicable laws and regulations, and construct approximately ½ mile of roadway.  <del>Close existing ODOT/ TERF access point and reconnect through Coyote Business Park road system. Construct new Patawa Creek crossing (bridge).</del>  Construct right hand turnout at South Market Lane and improve South Market Lane to industrial standards <b>as funding permits.</b>	<del>Close existing ODOT/ TERF access point and reconnect through Coyote Business Park road system. Construct new Patawa Creek crossing (bridge).</del>  Construct right hand turnout at South Market Lane and improve South Market Lane to industrial standards <b>as funding permits.</b>	Construct new access point in accordance with all applicable laws and regulations, and construct approximately 1 mile of roadway.  <del>Close existing ODOT/ TERF access point and reconnect through Coyote Business Park road system. Construct new Patawa Creek crossing (bridge).</del>  Construct right hand turnout at South Market Lane and improve South Market Lane to industrial standards <b>as funding permits.</b>
<b>Riparian Management Zone</b>	Continue to maintain 30 foot (<1 acre) buffer strip planted in non-native grass along eastern third of Patawa Creek (portion farmed by CTUIR).	Riparian Management Zone of 75' feet on the south side of creek, planted in native vegetation, no-entry buffer, in area that would otherwise be affected by development. Rest of site maintained in current management practices.  Total buffer length approximately 400 feet and buffer area .70 acres (all south of Patawa Creek).	Riparian Management Zone of 150' feet on each side of creek upstream of confluence with unnamed creek, and 225' downstream, planted in native vegetation, no-entry buffer, in area that would otherwise be affected by development. Rest of site maintained in current management practices.  Total buffer length approximately 3,500 feet and approximately 29 acres (north and south of Patawa Creek in affected project area.)		
<b>Estimated Development Costs</b>	\$0	\$900,000	\$2,360,000	\$3,160,000	\$4,440,000

## 2.6 Description of Alternatives Considered But Eliminated From Detailed Study

### **Alternative Locations Considered**

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Locations identified that did not meet these criteria (Figure 2-6), and were therefore eliminated from further consideration in this analysis, include the following:

#### ***Business Park north of I-84 at Exit 216 (Site 1)***

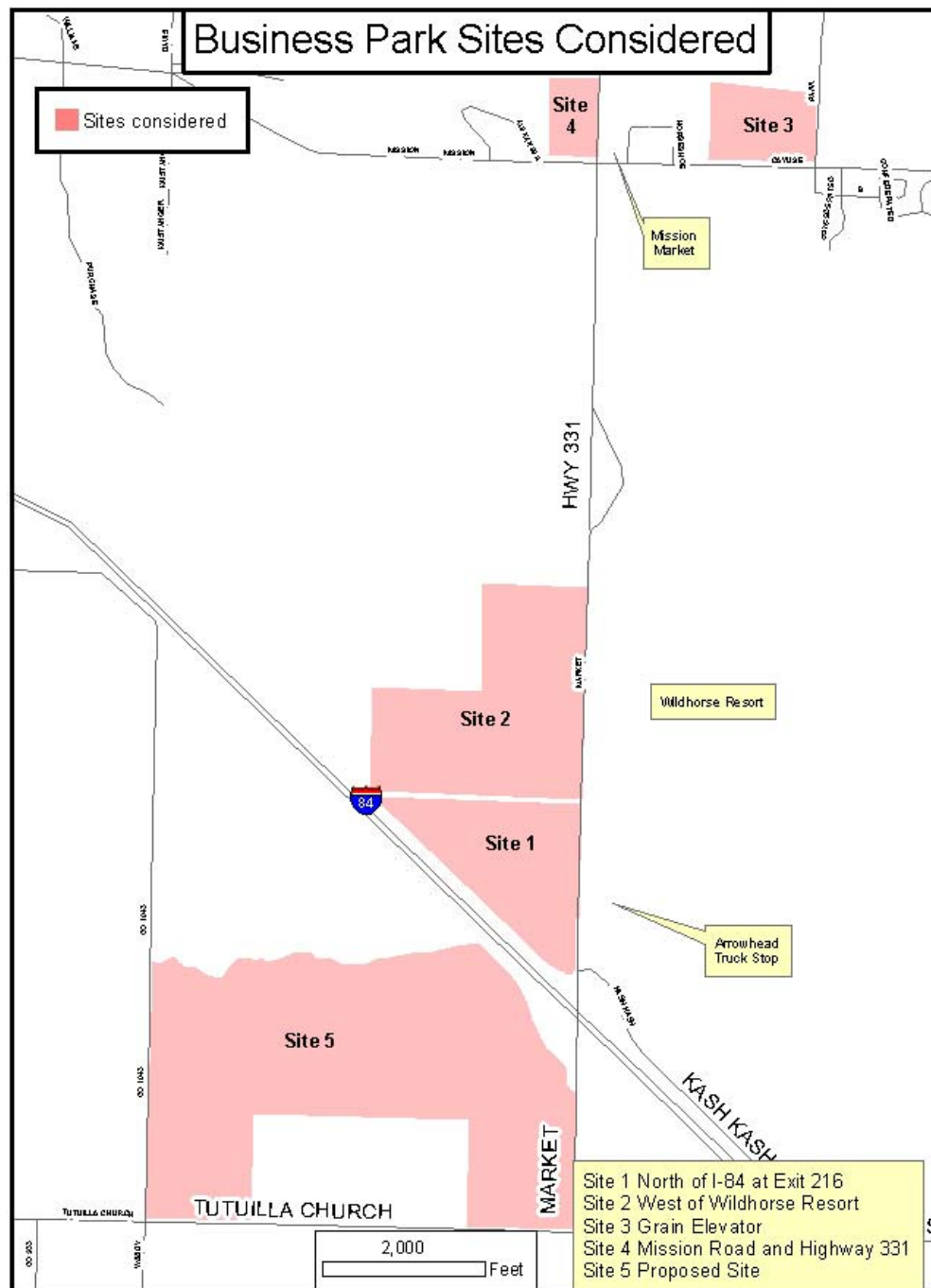
There are 160 acres of land in CTUIR Trust ownership on the west side of Highway 331 (west of Arrowhead Travel Plaza) that were considered for business and industrial development. This site is adequately sized for light industrial or warehousing use, is close to I-84 and would have low to minimal impact on water, habitat, and environmental resources (cultural impact would be unknown until assessed). It is close to existing infrastructure and potential tribal employees. This site was ruled out because Highway 331 is considered to be unsuitable for additional volumes of turning truck traffic and is designated for Tourist Commercial development in the Mission Community Plan.

#### ***Business Park north of I-84 west of Wildhorse Resort (Site 2)***

This location features proximity to I-84 and low to minimal impact on water, habitat, or environmental resources (cultural impact would be unknown until assessed). It is adequately sized for industrial use, close to existing infrastructure and potential tribal employees. The parcels west of Highway 331 and Wildhorse Resort are not in Trust status and are not owned by CTUIR, and purchasing an appropriate amount of land there would add to the total project cost compared to the cost of developing on land the CTUIR already owns. Access to the site would be through Highway 331 near the Wildhorse Resort and Arrowhead Travel Plaza in an area that is already impacted by commercial traffic.

#### ***Business Park at Grain Elevator (Site 3)***

There is a rail spur located at the CTUIR Grain Elevator on a site zoned for Industrial Development. This location is in trust status and tribal ownership, and is designated for industrial use. It is close to existing infrastructure and potential tribal employees. This site is too small for a light manufacturer or warehousing type industry, which typically would be seeking a minimum of 20 acres, but may be appropriate for other industrial uses. It is not immediately adjacent to Interstate 84 and is already impacted by residential and business traffic due to its proximity to housing developments in the Mission Basin and to the CTUIR government complex.



**Figure 2-11 Sites considered for location of Business Park**

***Business Park at Intersection of Mission Road and Highway 331  
(Site 4)***

Approximately fifteen acres are zoned Industrial Development at the northwest corner of the intersection of Mission Road and Highway 331. This parcel has ready access to community infrastructure and is also within close commuting distance for many enrolled CTUIR members. It is not owned by CTUIR. This site is too small for a light manufacturer or warehousing type industry, which typically would be seeking a minimum of 20 acres, but is appropriate for other industrial uses. The high visibility of this site makes it a good candidate for commercial development as well. The site may be already impacted by residential and commercial traffic due to its proximity to housing developments in the Mission Basin and to the CTUIR government complex.

***Other locations within the Mission Basin***

Other locations for a business park were sought within the Mission Basin, but no other parcels were large enough or had immediate access to the Interstate.

***Locations elsewhere on Umatilla Indian Reservation***

No other locations on the Umatilla Indian Reservation have both immediate access to the Interstate and proximity to municipal water and sewer service. The nearest interchange on I-84 west of Exit 216 is not a full interchange, with an on-ramp (but no off-ramp) for the east bound lanes and an off-ramp (but no on-ramp) to the west bound lanes. The next interchange to the west is not located on the Reservation. The next interchange to the East is located up Cabbage Hill in the Blue Mountains. While there may be adequately sized parcels available there, these parcels are not close enough to existing infrastructure to be serviceable for industrial development. This area also provides winter range for deer and elk.

***McNary Trust Site (Section 7)***

CTUIR does own a parcel of trust land at McNary that is zoned for industrial development. This site is currently proposed for development of a gas-fired power plant. It is large enough to accommodate additional business development, and there are plans to extend industrial water, sewer, and road service to the site. Access to Interstate 82 is within a few miles of the site. No critical natural or cultural resources have been identified on the site to date that would make it incompatible with industrial development (BIA 2004). This site was not selected because ~~it would not contribute toward the goal of diversifying the Umatilla Indian Reservation economy and because its distance from the Umatilla Indian Reservation would make daily commuting difficult for low-income tribal members who would otherwise benefit from the proposed job creation.~~

## **Alternative Uses of Subject Property**

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In addition to alternative locations, alternative uses for the chosen location were also considered but eliminated from further evaluation for reasons discussed below.

### ***Primary Manufacturing (“Heavy Industrial”)***

Primary manufacturing industries typically have higher hourly salaries than light manufacturing and distribution industries. Location of this type of industries to the Umatilla Indian Reservation would also accomplish the goal of increasing employment, diversifying the Umatilla Indian Reservation economy, and increasing revenue to CTUIR. However, these industries typically have air and/or wastewater emissions that do not meet CTUIR objectives for environmental management and restoration, especially given the proximity of the proposed site to Patawa Creek.

### ***Food Processing (or other uses requiring large volumes of wastewater)***

Food processing facilities are fairly common in Eastern Oregon, given the region’s agricultural production. These facilities typically require large volumes of water relative to those required by light manufacturing facilities, and consequently require the ability to process or otherwise dispose of relatively large volumes of wastewater. The proposed site does not have adequate land area to allow for land-application of the wastewater. Wastewater could be sent through an extension of the community wastewater system to processing in the City of Pendleton, but the wastewater transmission line is estimated to be at about 58% of capacity (White Shield/ Cooper JV, 1999), and it is questionable whether or not the line could handle the volumes anticipated with a food processing facility. On-site wastewater treatment is considered prohibitively expensive.

Finally, the food processing industry wage scale does not match CTUIR objectives for creating jobs in the \$9-\$20 range. Many food processing jobs are seasonal, and the food processing industry is a mature industry that is subject to severe competition from foreign facilities. The announcement in 2004 of the closure of the Simplot potato processing facility in Hermiston, and the projected loss of 600 jobs in the region, highlighted the instability of this industry and pointed out the undesirability of attracting more of these types of facility into the regional economy.

### ***Environmental Restoration***

Another option is environmental restoration of the site without industrial or business development. This option would be consistent with

CTUIR's emphasis on environmental restoration, and with an ongoing CTUIR project to improve environmental conditions in the Patawa-Tutuilla Creek watershed (Watershed Professionals Network, LLC, and Duck Creek Associates. 2003.) It would not be consistent with the site's Industrial Development zoning or with the Mission Community Plan.

Environmental restoration might include measures such as noxious weed control, cessation of farming, restoration of native plant species, and improvement of the riparian function of Patawa Creek through mechanical re-construction of a meander belt. These measures may result in temporary and part-time job creation, but would not bring a new source of revenue to CTUIR, would not promote tribally-owned businesses by providing a location suitable for business development, or diversify the Umatilla Indian Reservation economy.

### ***Alternative Agriculture***

The soils at the proposed project site could likely support vegetable crops if irrigation were available (Horneck, 2004). Conversion of the proposed subject property to vegetable crop production would likely create seasonal, minimum-wage jobs without benefits. This type of job would not meet the objectives of the CTUIR for diversifying the Reservation economy. This type of usage would not be consistent with the site's Industrial Development zoning or with the Mission Community Plan.

### ***Natural Resource-Based Enterprises***

Other proposed uses for the subject property have included grazing or pasturing of animals such as horses, cattle, and/ or bison. These uses would not meet project objectives of diversifying the Reservation economy (which already has experienced job and revenue loss due to declines in natural resource industries). Due to recent, widespread declines in natural resource industries throughout the Northwest, it is uncertain whether or not these uses could become profitable and create additional jobs for CTUIR members or revenue for CTUIR. This type of usage would not be consistent with the site's Industrial Development zoning or with the Mission Community Plan.

### ***Commercial Enterprises***

Throughout 2003, when the CTUIR was developing the five-year Overall Economic Development Plan, many CTUIR members expressed an interest in expanded commercial development on the Reservation. There is a great deal of interest in expanding restaurant, entertainment, and shopping options for CTUIR members. There is adequate space for these uses at the subject site. However, the Mission Community Plan identifies the area north of I-84 as being a

higher priority for commercial development than the area south of I-84 (see Figure 3-2). This is primarily because of the interest in keeping industrial and commercial traffic separate for safety considerations, and because Wildhorse Casino Resort and Arrowhead Travel Plaza have already established the area north of I-84 as appropriate for commercial development.

Currently, community water lines provide service to Wildhorse Casino Resort but not to Arrowhead Travel Plaza. Since proposed action Alternatives C, D, and E would extend community water service past CTUIR-owned properties that are designated in the Mission Community Plan as being suitable for commercial development (see Figure 3-2), they would also have the effect of making it easier to construct commercial development at these sites (since the cost of providing water service to the commercially designated sites would be decreased compared to the current condition.) Under Alternatives D and E, the extension of the community sewer line past these sites would further decrease the cost of future wastewater service to these sites. These should be considered potential cumulative impacts of these alternatives and are included in the cumulative impact discussion in Chapter 3.

Commercial usage of the site would not be consistent with the site’s Industrial Development zoning or with the Mission Community Plan.

***Housing Development***

Housing development is a priority for CTUIR, and there is adequate space for development of either single family or multiple dwelling units on the subject property. However, the CTUIR has prioritized this parcel for business development and not for housing, and there are other parcels in CTUIR ownership that are appropriate for housing development. Industrial and residential are not compatible uses when considering the potential volumes of traffic in and out of a business park (see Sections 3.2 and 3.9) and the need for safety in a residential area. Residential usage of the site would not be consistent with the site’s Industrial Development zoning or with the Mission Community Plan.

**2.7 Alternative Comparison**

**Project Objective Comparison**

Table 2-4 shows how each alternative meets the project objective, as listed in Chapter 1, Section 1.3.

**Table 2-4  
Comparison of Alternatives by Project Objective**

<b>Project Objective</b>	<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>
<b>New jobs created from new business operations on Reservation</b>	0	45	160	275	546

### **Project Resource Impact Comparison**

Projected impacts on a wide range of resources were considered in developing the analysis. Impacts for all action alternatives are relatively continuous; that is, the alternatives represent a range of impacts that vary in scope generally from least impact in Alternative B to the greatest impact in Alternative E. Generally, the greatest increase in impact for most resources is projected to occur between Alternative B and Alternative C. (Table 2-5).

Table 2-6 compares mitigation measures recommended for each alternative.

**Table 2-5  
Resource Impact Comparison**

Issue	Current Conditions	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Land Use						
Direct Impact	Surrounding land use includes agriculture, residential, and commercial	None	Creation of a more urban atmosphere with associated noise, traffic, and lights, as consistent with the Mission Community Plan.			
Indirect Impact	No water or sewer lines extend south of I-84 or to potential commercial property north of I-84	None.		Reduced cost for proposed commercial development north of I-84 and residential development south of Tutuilla Church Road compared to Alternatives A and B due to expansion of infrastructure (water and sewer) in vicinity.		
Cumulative Impact	Lack of appropriate buildable land for industrial and business development on Reservation	Greater pressure for industrial development elsewhere on 34 acres zoned industrial on the Reservation and a scattered pattern of industrial development.		Any industrial development proposed for Reservation would likely be concentrated on proposed project site, resulting in a concentrated pattern of industrial development.		
Water Resources						
Hydrology	Patawa Creek has impaired hydrological function, which limits capacity to provide beneficial uses.	No changes from current conditions.	Minor positive impact on current conditions with creation of Riparian Management Zone.			
	Potential for creek to overflow banks with a >25 year storm event.	Potential for creek to overflow banks with a >25 year storm event.				
Water Quality and Beneficial Uses	Patawa Creek not meeting CTUIR water quality standards	No changes from current conditions.	Minor positive impact on current conditions with expansion of Riparian Management Zone.			

**Table 2-5**  
**Resource Impact Comparison**

Issue	Current Conditions	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
<b>Water Resources (continued)</b>						
<b>Ground water and Area Wells</b>	<i>Area wells vary but are generally able to provide for residential and agricultural needs</i>	No impact.	No impact on area wells from proposed on-site well.	Increased demand in municipal water system and demand on aquifer estimated at 1.4-2.9% increase over current withdrawals. No impact on surrounding wells.		
<b>Biological Resources</b>						
<b>Wildlife including Threatened, Endangered and Sensitive Species</b>	<i>Area provides limited habitat value for native species</i>	No change.	No impact on terrestrial habitat. Not likely to adversely effect any species.	Impact on terrestrial habitat limited to ground disturbance related to crossing of Patawa Creek.  Not likely to adversely effect any species.		
<b>Fisheries</b>	<i>Closest rearing habitat for endangered fisheries is 1+ river mile downstream; Patawa Creek is not habitat due to seasonal nature</i>	No change.	No impact.	Not likely to adversely effect any species.		
<b>Plants</b>	<i>Some remnant areas of shrub-steppe with native upland and riparian plants heavily impacted by noxious weeds</i>	No change.	Greater potential for further spread of noxious weeds due to ground disturbing activity.			

**Table 2-5  
Resource Impact Comparison**

Issue	Current Conditions	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Visual Resources						
Visibility from near, mid and far distances	Viewshed is largely agricultural with some residential and industrial/ commercial impact from I-84, Wildhorse, Arrowhead	No change.	Construction and operation would be visible from near distance and may be visible from mid and far distances.	Construction and operations would be visible from near, mid and far distances.		
Noise						
Direct Impact	Ambient noise level approximately 55 dBA.	No impact at nearest residences or nearby commercial facilities.				
Cumulative Impact		Possible increase in ambient noise level due to cumulative impact of business operations and traffic on county roads and Interstate 84.				
Cultural Resources						
Project Design	Existing cultural resources continue to be impacted by agricultural activity	No change.	The project would be designed to avoid all cultural resource sites. If this is not feasible a mitigation plan would be determined in consultation with the THPO and lead federal agency.			
Air Quality						
Direct Impact	Emissions from area (farming and road dust) and mobile (car, truck) sources, based on 1998 Air Emissions Inventory	No increase in, point, area and mobile sources	An increase of less than or equal 0.01% for each of the criteria air pollutants (no permit required.)	An increase of between 0.1-2.9% for each of the criteria air pollutants (no permit required).		An increase of between 0.2-4.0% for each of the criteria air pollutants (no permit required).

**Table 2-5  
Resource Impact Comparison**

<b><i>Air Quality (continued)</i></b>						
<b>Issue</b>	<b><i>Current Conditions</i></b>	<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>
<b>Air Quality Indirect Impact</b>	<i>Emissions from area, mobile and point sources per CTUIR 1998 Air Emissions Inventory</i>	Insignificant contribution to UIR air emissions inventory: Would continue at current rates	Increase in criteria air pollutants: <ul style="list-style-type: none"> <li>• 0.1% PM<sub>10</sub></li> <li>• 0.1% CO</li> <li>• 0.2% NO<sub>x</sub></li> <li>• 0.2% VOC</li> </ul>	Increase in criteria air pollutants: <ul style="list-style-type: none"> <li>• 1% PM<sub>10</sub></li> <li>• 0.9% CO</li> <li>• 1.2% NO<sub>x</sub></li> <li>• 2.8% VOC</li> </ul>		Increase in criteria air pollutants: <ul style="list-style-type: none"> <li>• 1.2% PM<sub>10</sub></li> <li>• 1.2% CO</li> <li>• 2.3% NO<sub>x</sub></li> <li>• 6% VOC</li> </ul>
<b>Air Quality Permitting Required</b>	<i>None</i>	None	None	None		None
<b><i>Transportation</i></b>						
<b>Sight Distance</b>	<i>Inadequate sight distance at I-84 interchange</i>	Inadequate sight distance at I-84 interchange				
<b>Traffic Levels</b>	<i>70 trips entering I-84 interchange from South Market Lane during the pm peak hour 340 trips per hour entering I-84 interchange heading south from Highway 331</i>	90 trips entering I-84, an increase of 28%, interchange from South Market Lane during the pm peak hour projected for 2024	39 additional trips over current conditions or 43% increase over current traffic levels entering I-84 interchange from South Market Lane during the pm peak hour projected for 2024	175 additional trips over current conditions or 250% increase over current traffic levels entering I-84 interchange from South Market Lane during the pm peak hour projected for 2024	297 additional trips over current conditions or 324% increase over current traffic levels entering I-84 interchange from South Market Lane during the pm peak hour projected for 2024	

**Table 2-5  
Resource Impact Comparison**

Issue	Current Conditions	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Socioeconomic						
Permanent Jobs	86% of Native American employment on Reservation is from CTUIR  Tribal Farm Enterprise employs 3 staff to farm over 3,000 acres including subject parcel	No additional jobs created from parcel.	An estimated 45 new permanent jobs created at full build out.	An estimated 160 new permanent jobs created at full build out.	An estimated 275 new permanent jobs created at full build out.	An estimated 546 new permanent jobs created at full build out.
Small business opportunities	None available on Reservation with water, sewer service	Same as existing condition.	3 lots available	4 lots available		13 lots available
Agricultural Opportunities and Revenues	Existing revenues of \$12,000 per year from agricultural operations at parcel	Same as existing condition	Estimated revenues of \$12,700 per year from ongoing operations on balance of parcel	Estimated revenues of \$7,300 per year from ongoing operations on balance of parcel		No agricultural revenues from proposed project site.
Impact on Property Values	Current strong demand for residential property on Reservation.	Current trends continue- strong demand for residential parcels supports continued upward price pressure. Need for additional moderate income housing on Reservation to support projected increase in employment.				
Impact on Poverty and Income Levels	Poverty rates of American Indians on Reservation are disproportionately high compared to Umatilla County; income levels disproportionately low.	Minimal increase over 10 year period	Modest increase in income & decrease in poverty- not likely to be measurable	Increase in per capita income and decrease in poverty- likely to be measurable over a 10 year period		

**Table 2-5  
Resource Impact Comparison**

Issue	Current Conditions	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Infrastructure						
Water Usage	755 acre feet per year permitted in CTUIR Water System	Additional residential demands for groundwater prompt identification of additional water source for Mission Community water system				
	No groundwater withdrawal from existing property site	No new demand for water from proposed project site	5.6 acre feet per year from new well at proposed project site	10.5 acre feet per year from CTUIR water system	13.54 acre feet per year from CTUIR water system	22.10 acre feet per year from CTUIR water system
Wastewater	CTUIR operates wastewater collection line, which delivers wastewater to City of Pendleton treatment plant. Capacity of line estimated at 58% in 1998.	No additional generation of wastewater (sanitary sewer) from proposed project site.	Septic and drainfields treating domestic wastewater from proposed project site.		Estimated 4,125 gallons per day delivered to City of Pendleton via wastewater collection line	Estimated 8,190 gallons per day delivered to City of Pendleton via wastewater collection line
Emergency Response						
Fire Service	Umatilla Tribal Fire Department responds to all calls on Reservation	No demand for services from agricultural operations at proposed project site.	Limited fire protection to businesses (tanker truck).		Hydrants and sprinklers, and fire department response would provide fire protection to businesses	
Police Service	Umatilla Tribal Police Department provides patrolling and incident response on Reservation.	No demand for services from agricultural operations at proposed project site.	Police Department would provide patrolling and incident response to the proposed business park.			

Table 2-6 Mitigation Measures					
Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Land Use	Identify other opportunities for business development on Reservation	None			
Water Resources	None	Seasonal application of herbicide during noxious weed control in Riparian Management Zone to minimize impact on water quality.			
	None		Appropriate design and construction of Patawa Creek crossing ( <del>bridge</del> <b>utility trench</b> ) to minimize erosion potential.		<b>None.</b>
	None	<del>Design and construction of bridge</del> <b>utility trench</b> to minimize drainage to Patawa Creek channel. <del>Reclamation of ODOT road by returning to natural contour and compacting, revegetation with native plants.</del>			
	None	Implement Wellhead Protection Measures for all business operations on site (detailed in Appendix C).			
	None	Pollution Prevention Plan prepared by CTUIR and/or contractor for EPA review and approval for each phase of construction.			
	None	Herbicidal control of noxious weeds in Riparian Management Zone would need to be used under Best Management Practices for application and labeling.			

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Biological Resources	None	None	Implementation of noxious weed control plan during construction and operations.		
Air Quality	None	Dust Control measures during construction to mitigate for additional dust resulting from ground disturbing activity.			
	None	None	Require best management and emissions control technology from refueling station. Vegetation of disturbed areas to minimize dust from bare soil.		
	None	None	Encourage fuel efficient vehicles, alternative fuels, carpooling.		
Cultural Resources	None	Consult with Tribal Historic Preservation Office to protect known cultural resources in the project area.			
	None	<del>If the existing power line, which is older than fifty years of age, is to be upgraded then the line would need to be properly recorded on a Section 106 Documentation Form and Level of Effect Form. A formal determination of eligibility would need to be made and mitigation measures developed as necessary in consultation with the Tribal Historic Preservation Officer and the lead federal agency prior to any changes to the line. <b>None.</b></del>			
	None	<del>If traditional cultural properties are identified that will be adversely affected by the proposed undertaking, mitigation measures would be determined in consultation with the THPO and lead federal agency. <b>CTUIR should adopt plan to address viewshed impacts. See Visual Impact section, below.</b></del>			
	None	Lease language specifically protecting cultural resources.			

**Table 2-6  
Mitigation Measures**

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Transportation	Traffic signal warranted by 2024 to improve wait times anticipated at eastbound I-84 ramps.	Traffic signal warranted by 2024 to improve wait times anticipated at eastbound I-84 ramps.  Conduct speed study along Highway 331 in the proposed project vicinity and implement speed reduction measures as warranted to maintain low accident rate at I-84 interchange.			
	Highway 331 overpass improvements recommended under all Alternatives.  ODOT installation of traffic signals as traffic warrants are met.  ODOT reconstruction of overpass to construct turn lanes and improve safety.				
					Traffic signal recommended at Business Park Access Road approximately 18 years after full build-out of site.
Visual Impact	None	Adopt guidelines to reduce night lighting pollution.			
	None	<b>CTUIR to adopt plan to minimize impact on viewshed. Lessees would be required to paint buildings and facilities neutral or earth-tone colors.</b> Landscaping would be planted in maintained in buffer strip along southern and eastern sides of parcel.			
Socioeconomic	Identify and Implement alternate measures to create jobs and generate revenues	Implement job training programs to ensure maximum CTUIR member benefit from proposed job creation.			

## 2.8 Unavoidable Adverse Impacts

Unavoidable adverse impacts resulting from the action Alternatives (B-E) would be:

- Permanent loss of agricultural use and value of land within development footprint (portions of the site would be farmed up until construction.)
- Additional water withdrawn from Mission Well #5 aquifer under Alternatives C, D, and E. This water from the community water system would not be available for other uses.
- Reduction in capacity in community wastewater transmission line and wastewater treatment system under Alternatives D and E.
- Increased air emissions from increased vehicular traffic and businesses at the park. See Section 3.5 for more detail.
- Increased light pollution from night lights. See Section 3.7 for more detail.
- Change in visual appearance from agricultural to industrial. See Section 3.7 for more detail.
- Increased traffic, both truck and car, accessing the site from I-84, resulting in a volume of traffic that is similar to the volume of traffic currently accessing I-84 from the north (from Wildhorse Resort, Arrowhead, Highway 11, Mission, etc.) See Section 3.9 for more detail.